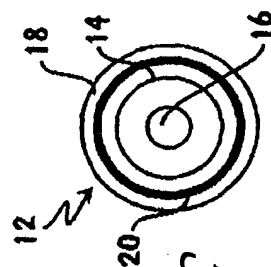
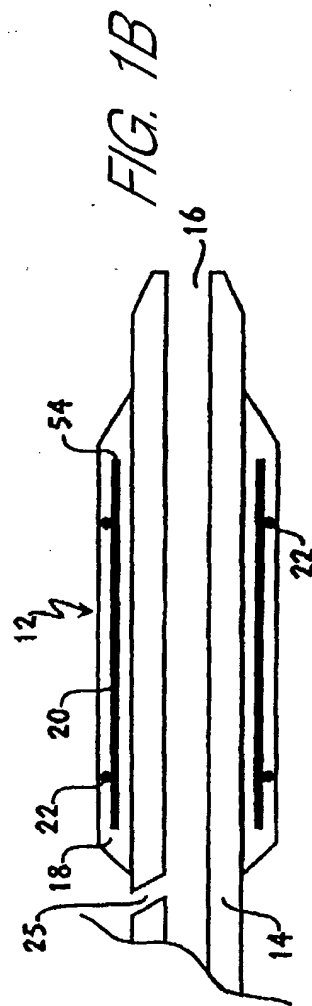
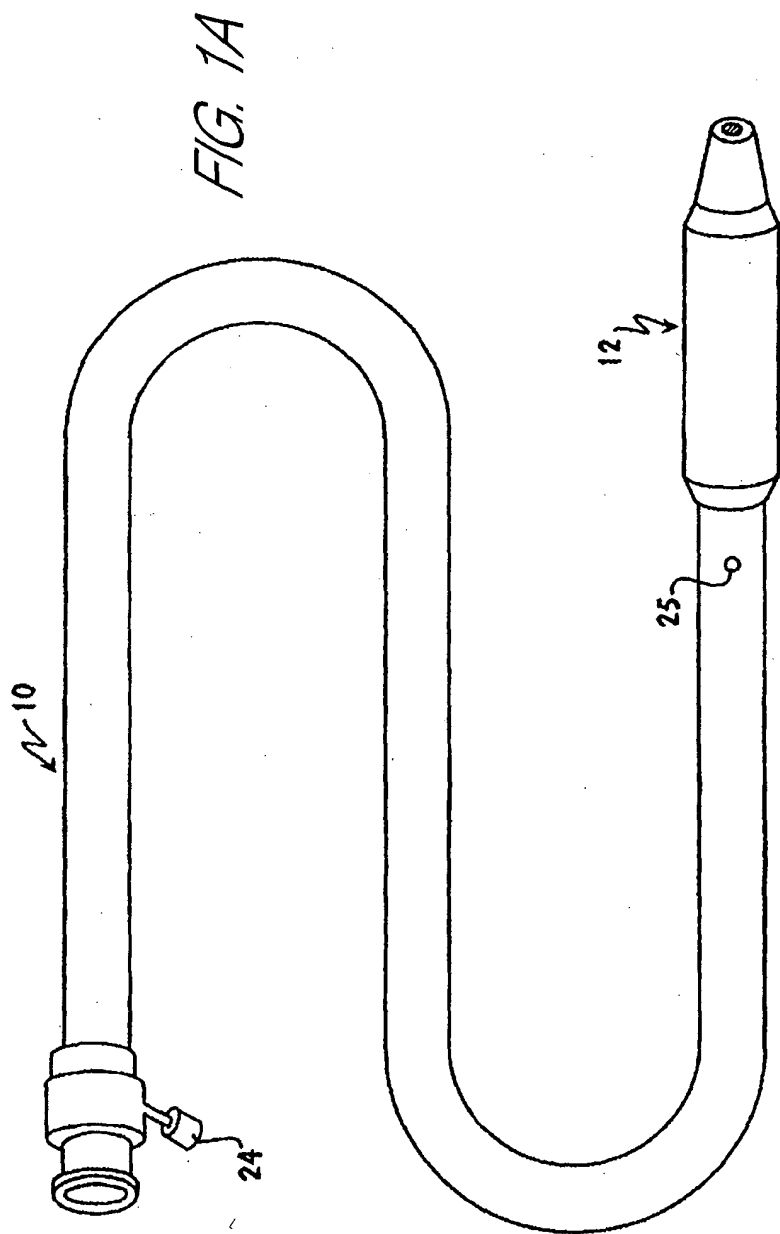


ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

Atty Docket: EKOS.8CP3DV1C3

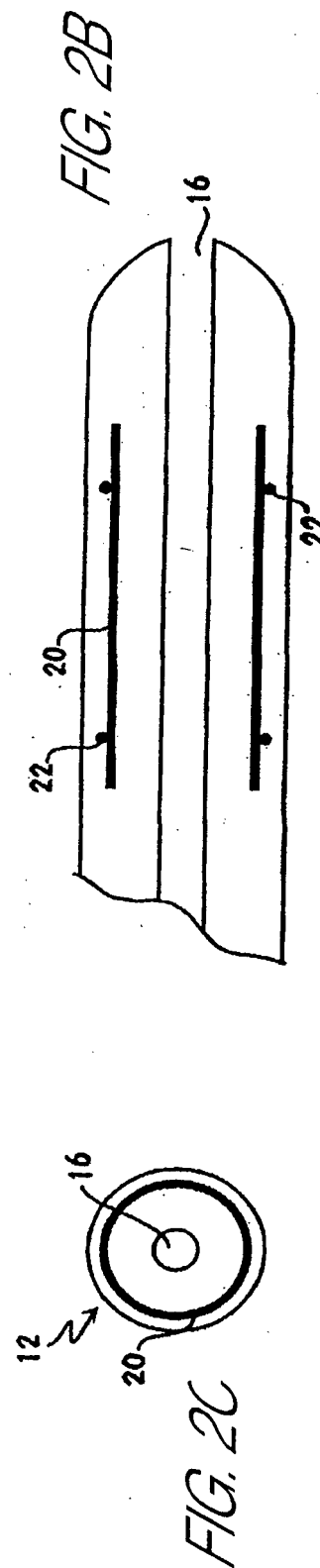
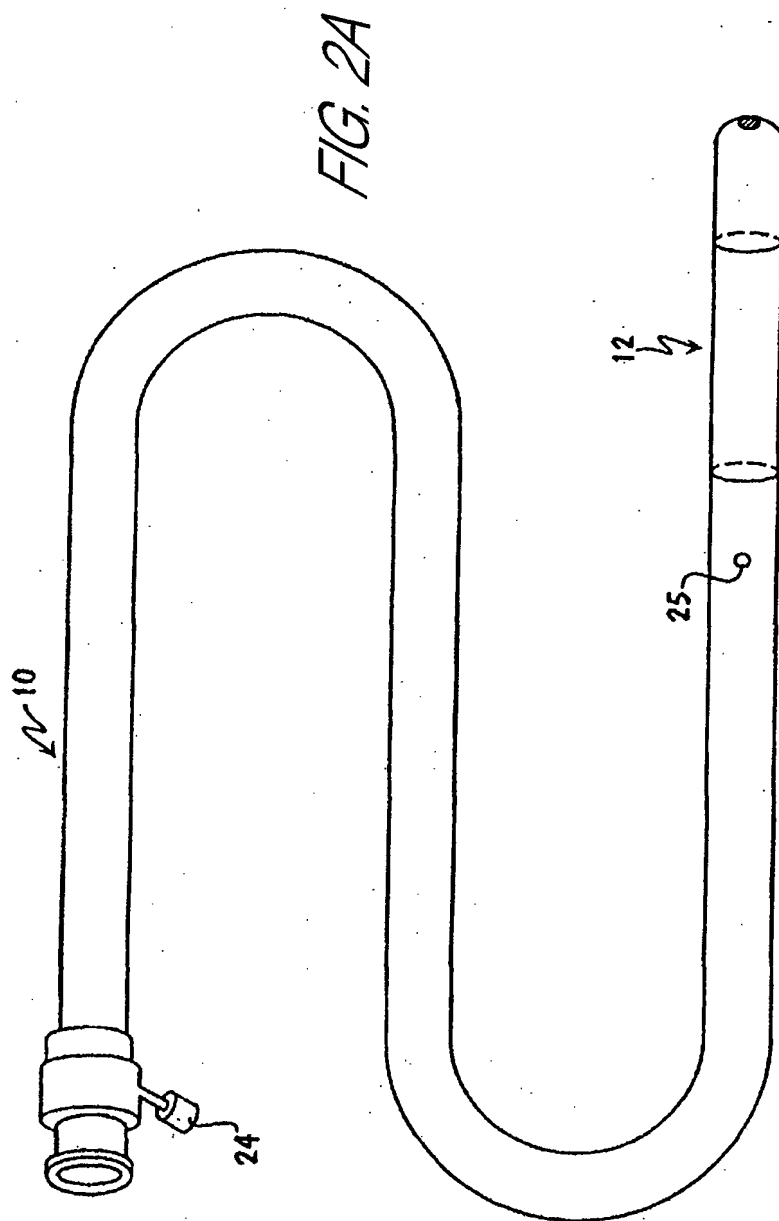


ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

Atty Docket: EKOS.8CP3DV1C3

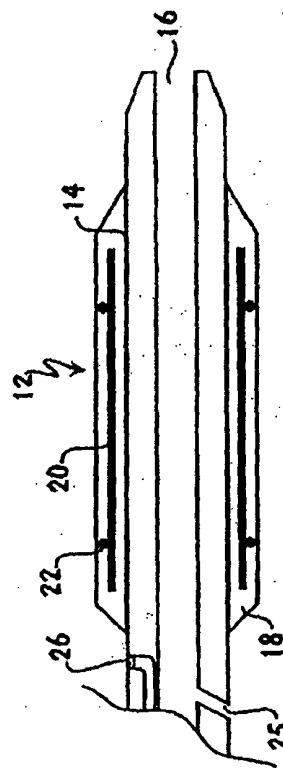
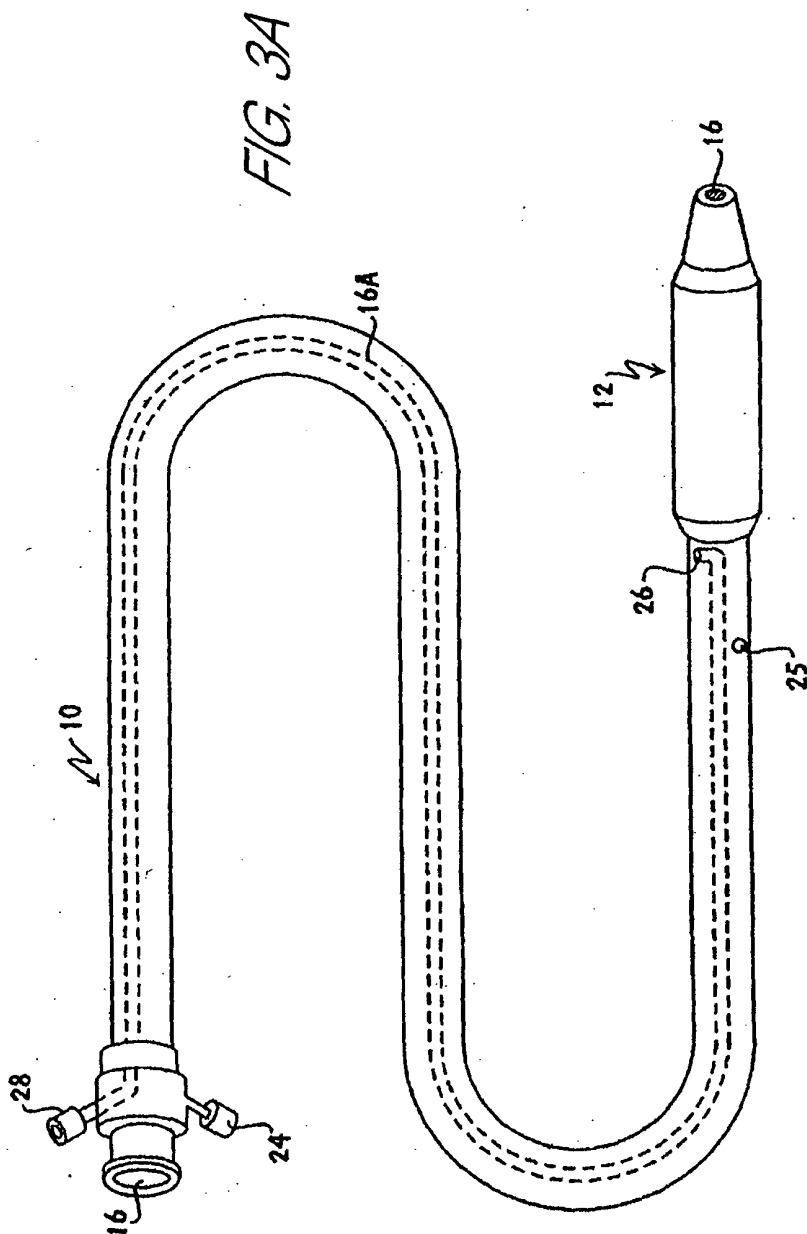


ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

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ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

Atty Docket: EKOS.8CP3DV1C3

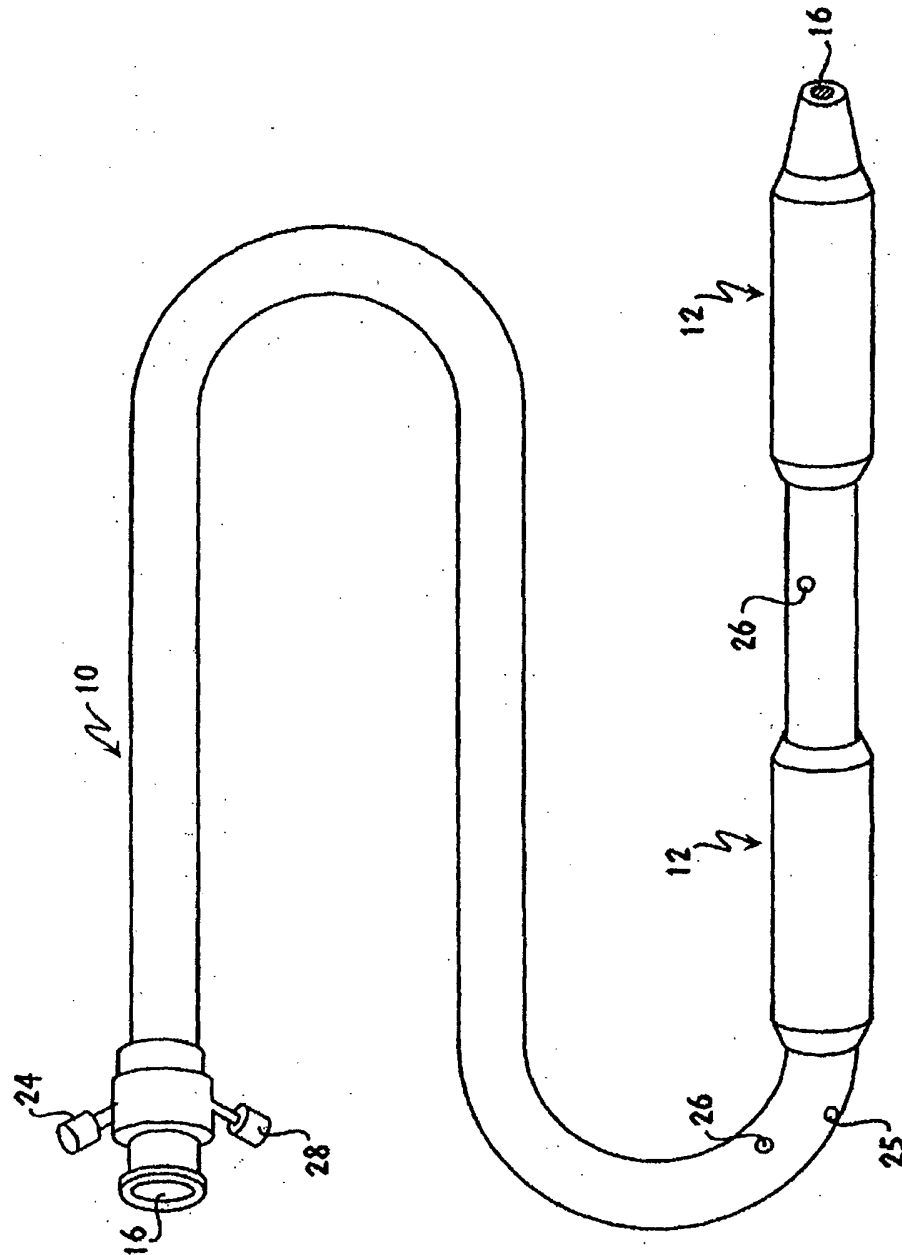
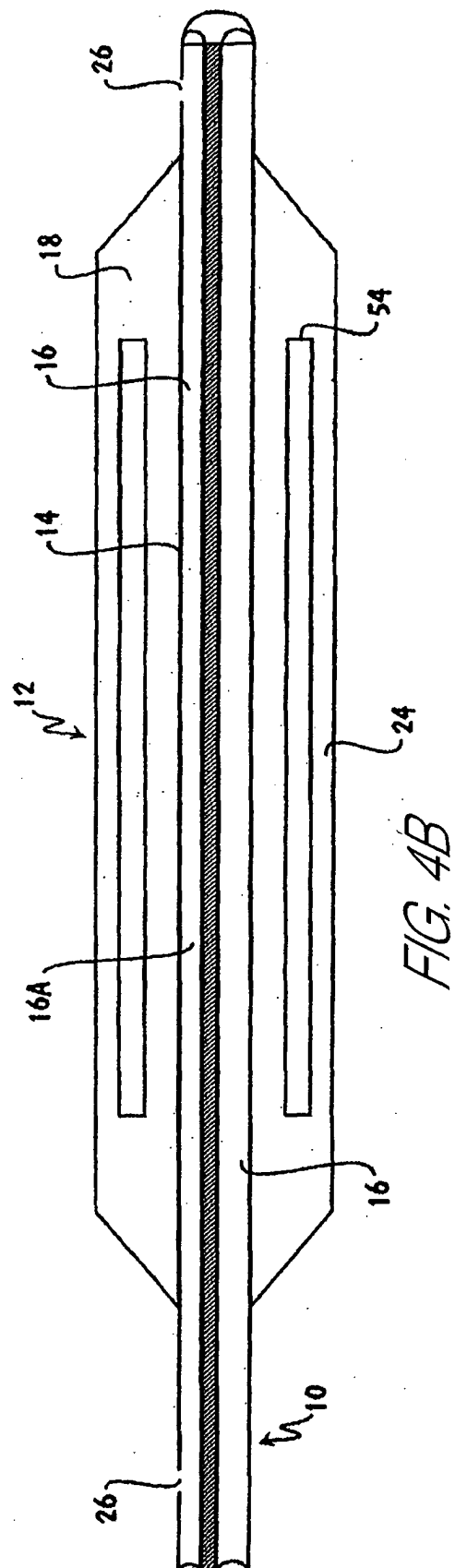
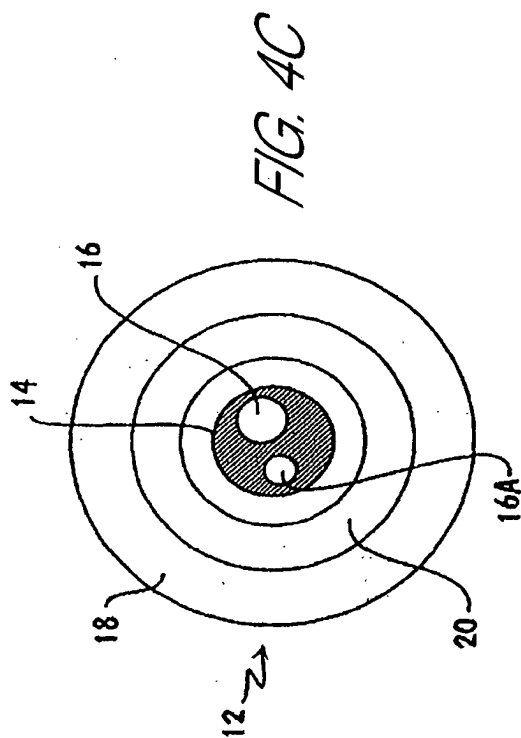


FIG. 4A

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

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ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown Atty Docket: EKOS.8CP3DV1C3

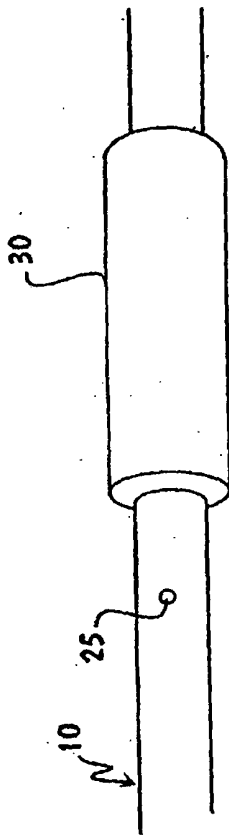


FIG. 5A

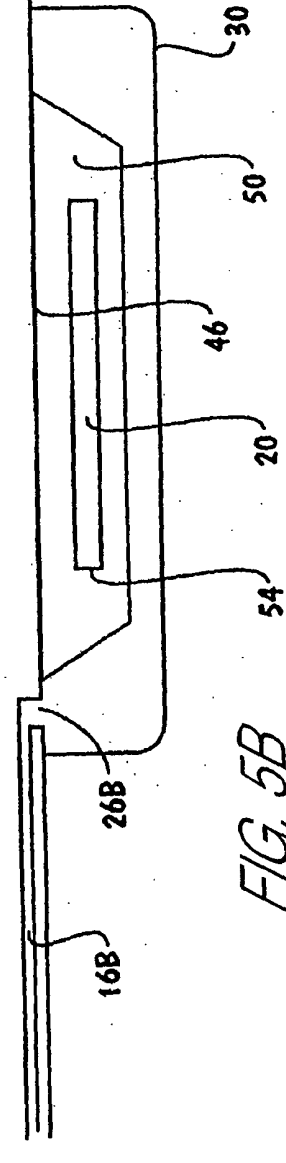
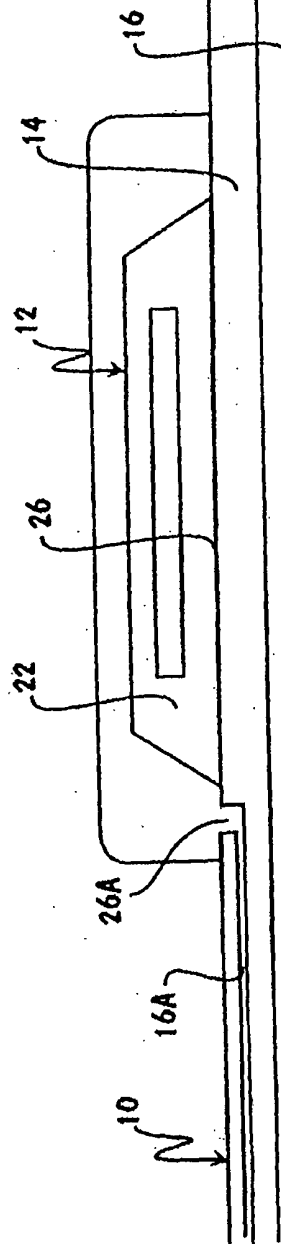


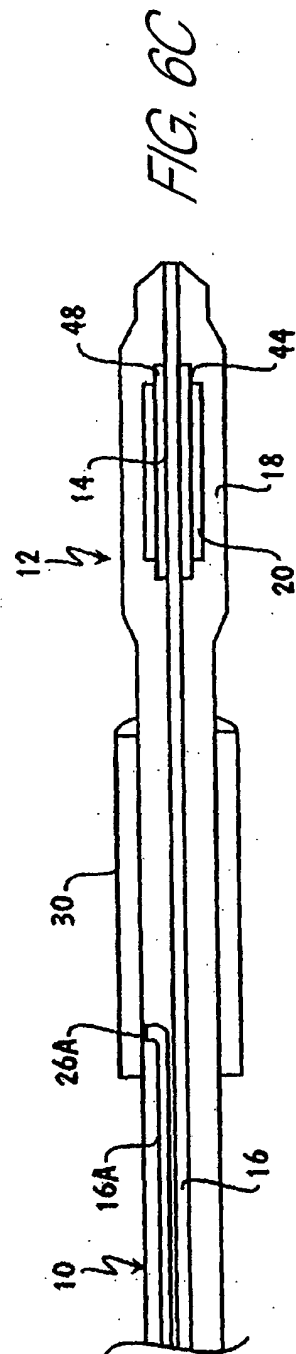
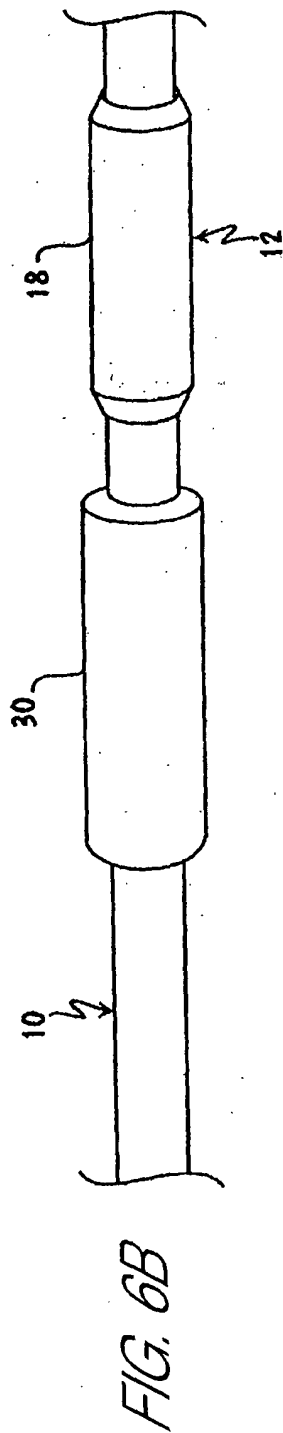
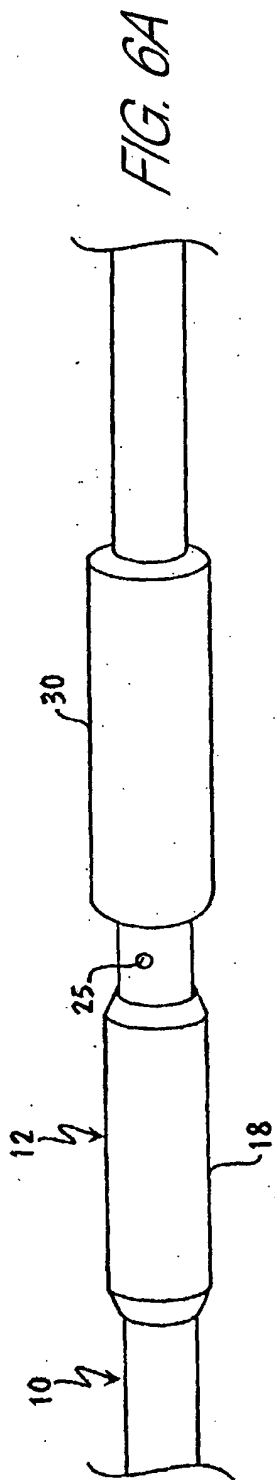
FIG. 5B

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

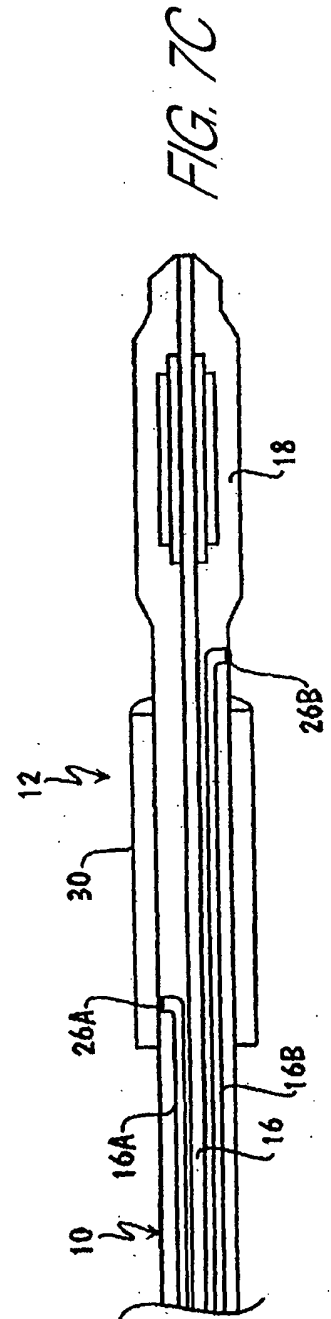
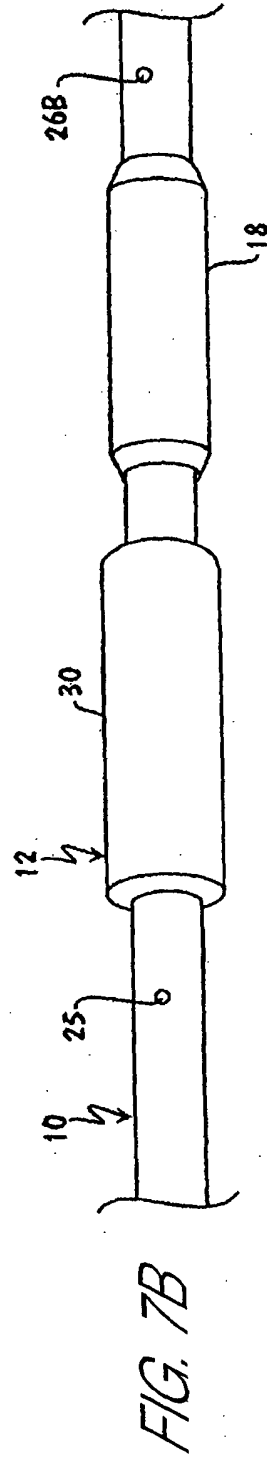
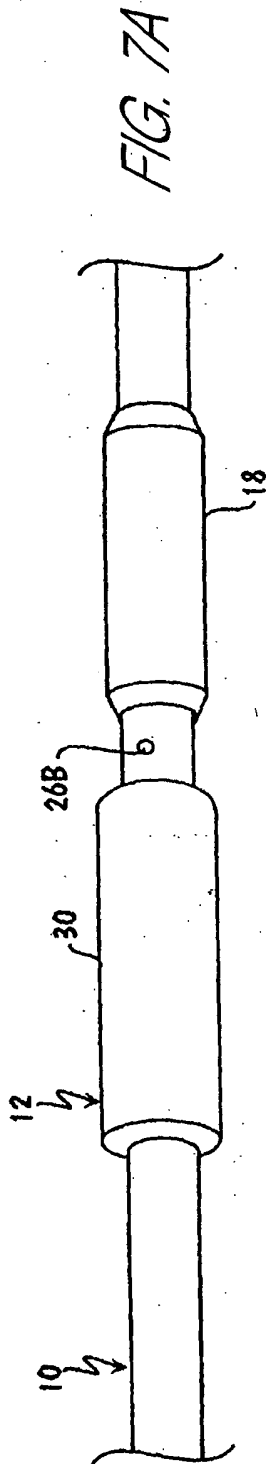
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ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown Atty Docket: EKOS.8CP3DV1C3



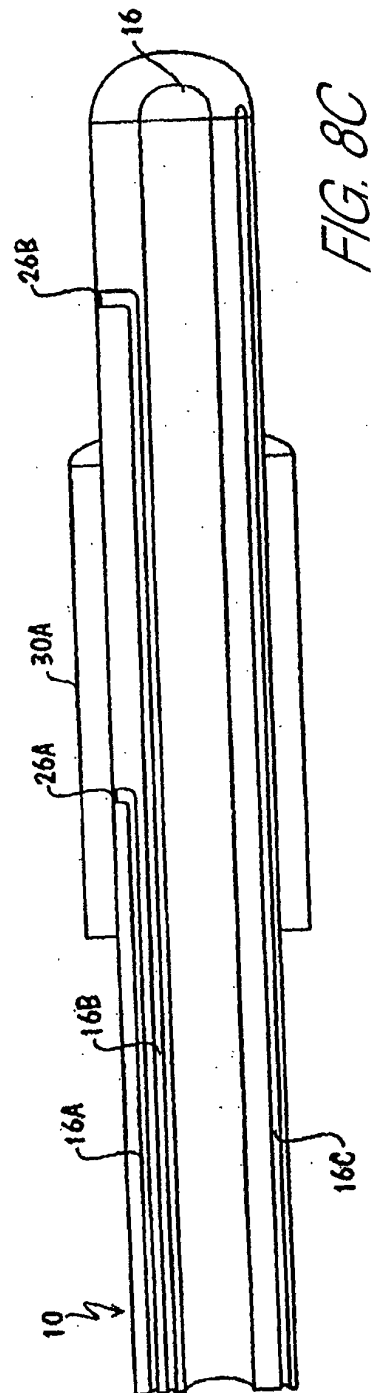
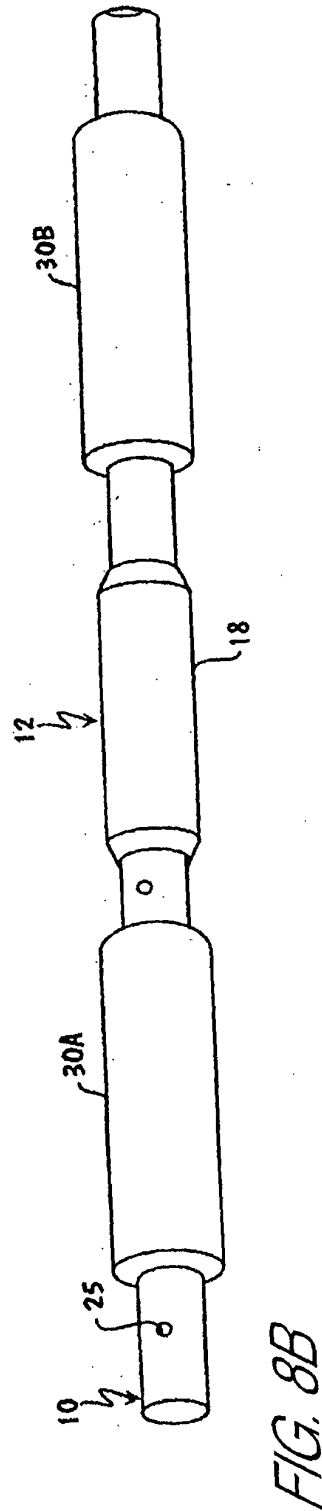
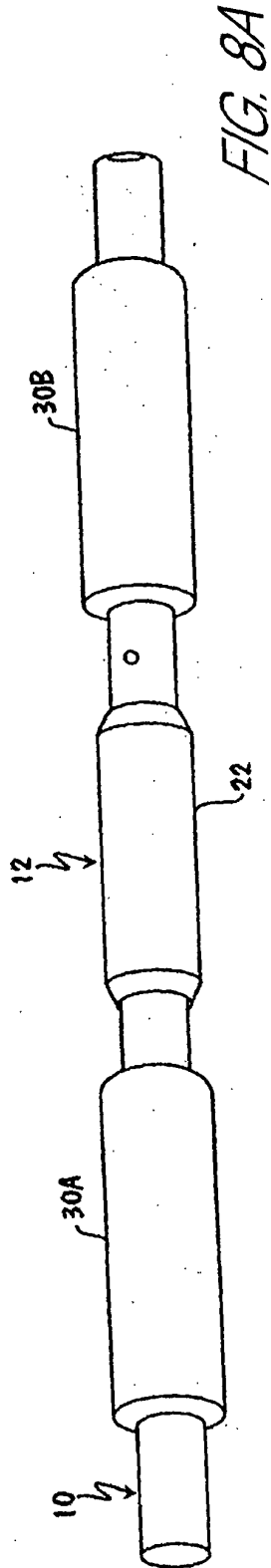


ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

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ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

Atty Docket: EKOS.8CP3DV1C3

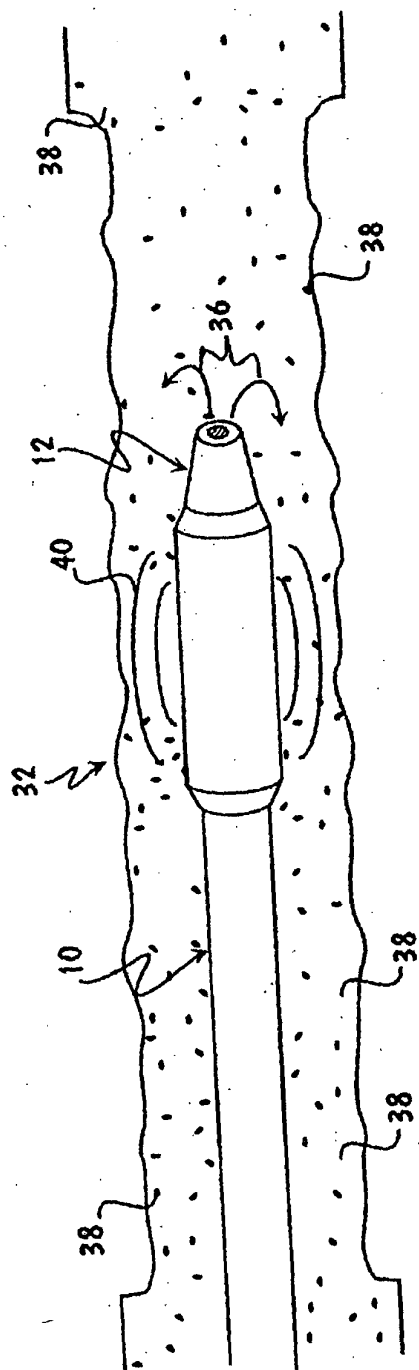


FIG. 9A

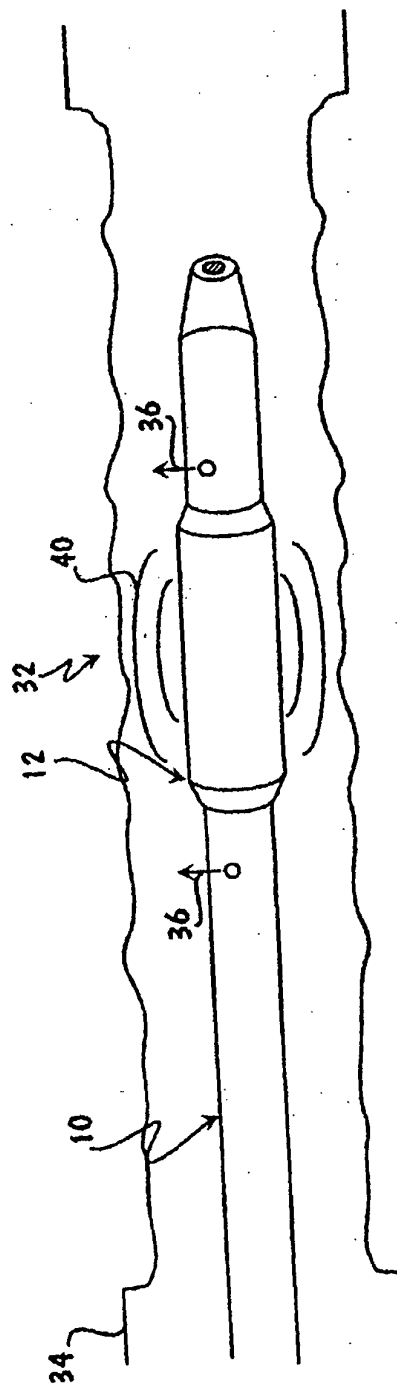


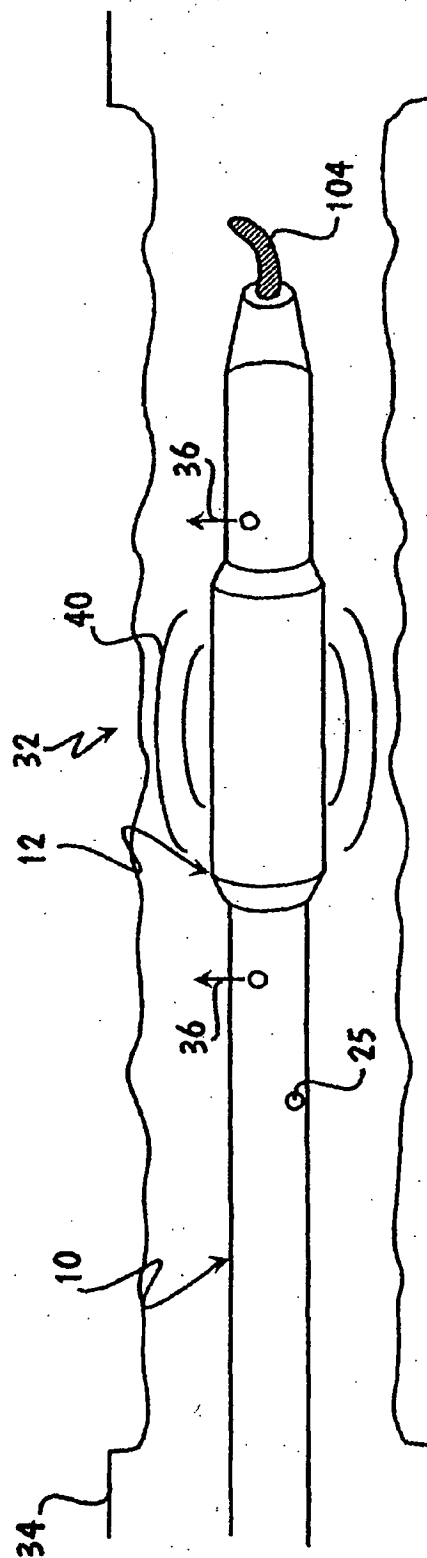
FIG. 9B

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

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ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

Atty Docket: EKOS.8CP3DV1C3

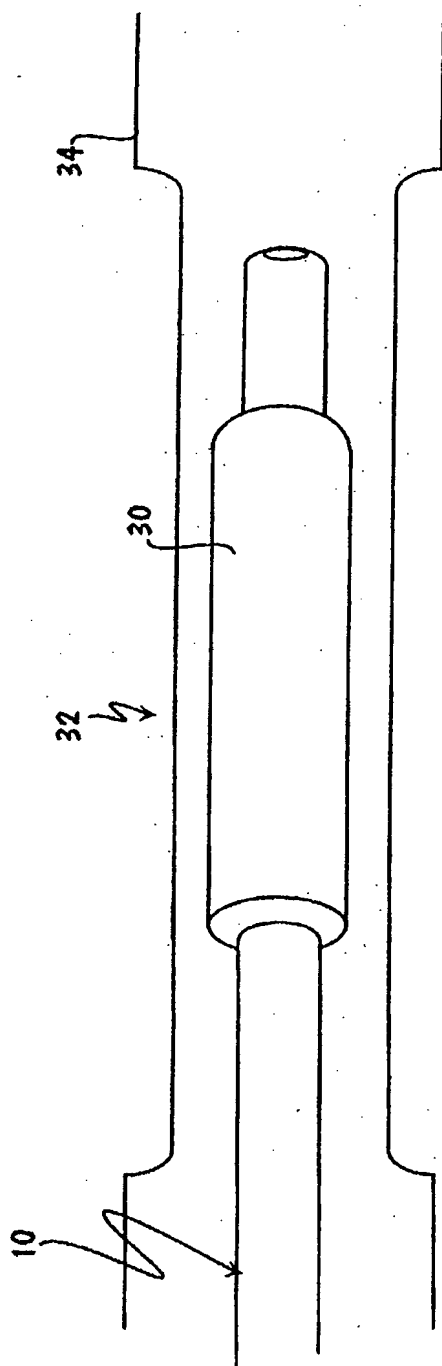


FIG. 9D

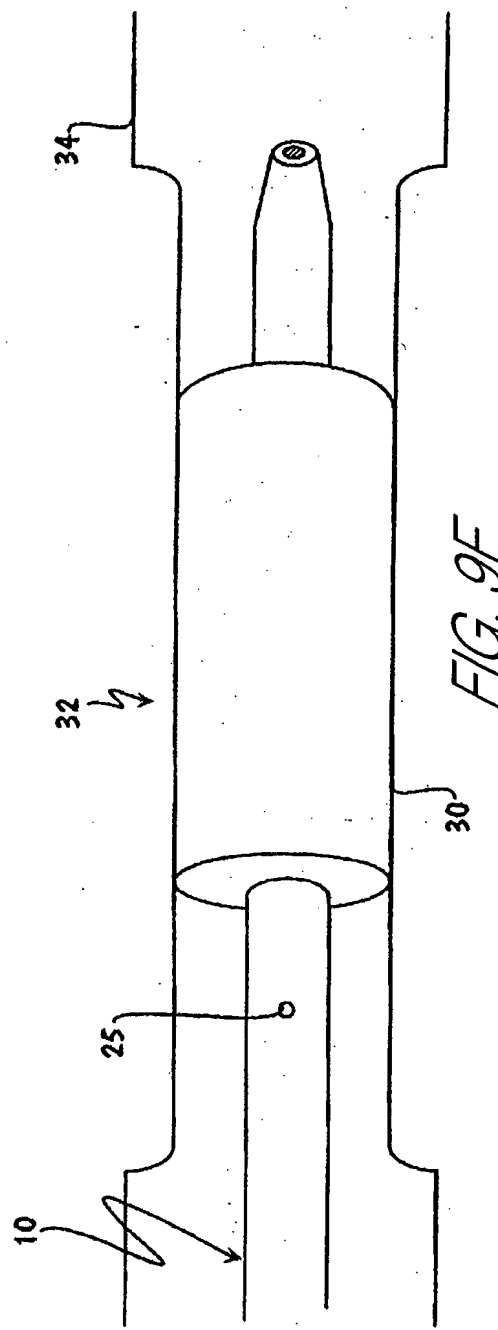


FIG. 9E

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

Atty Docket: EKOS.8CP3DV1C3

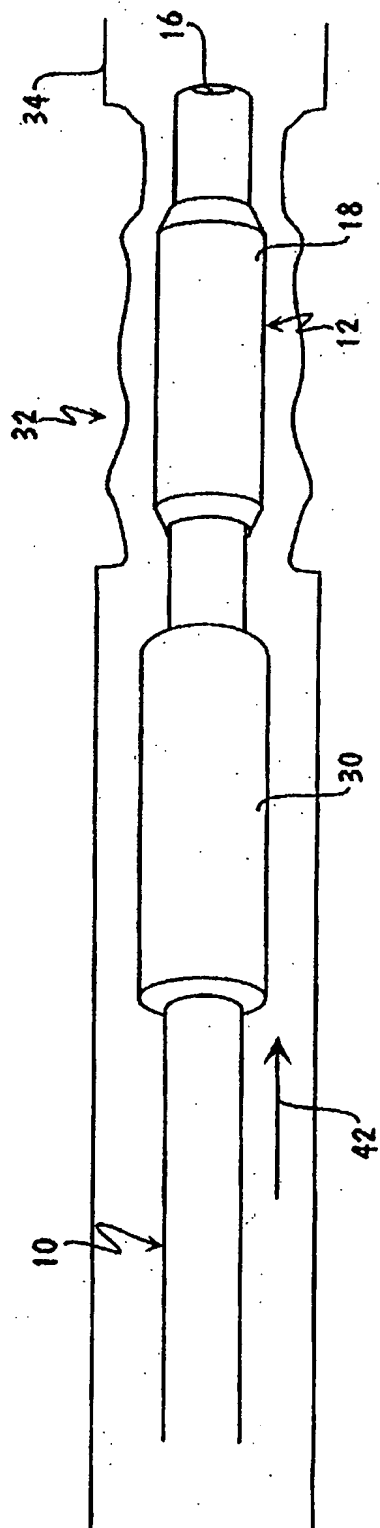


FIG. 9F

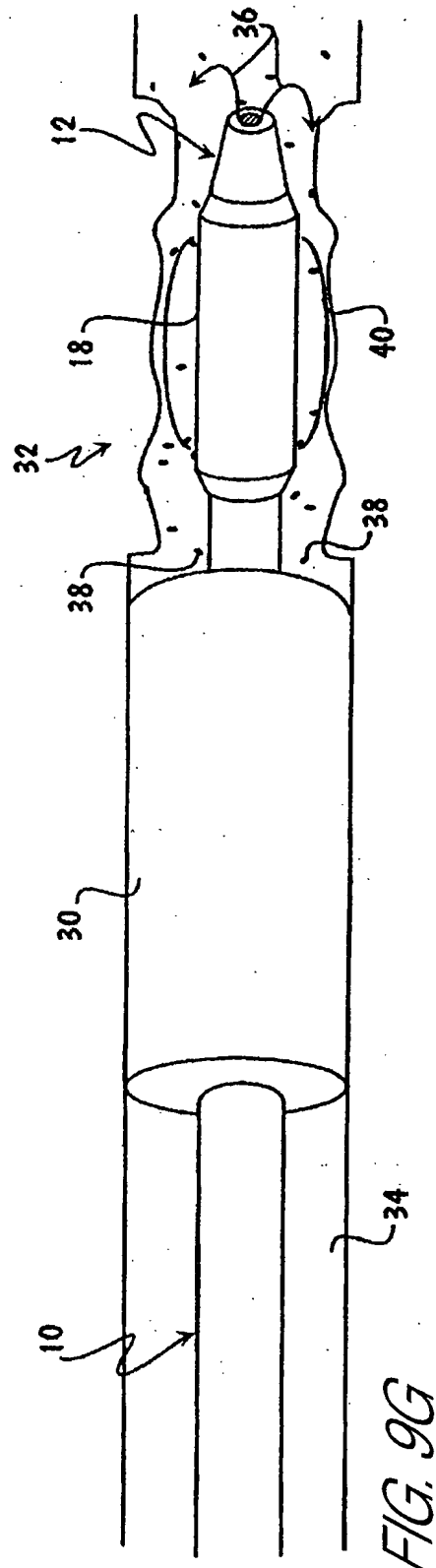


FIG. 9G

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

Atty Docket: EKOS.8CP3DV1C3

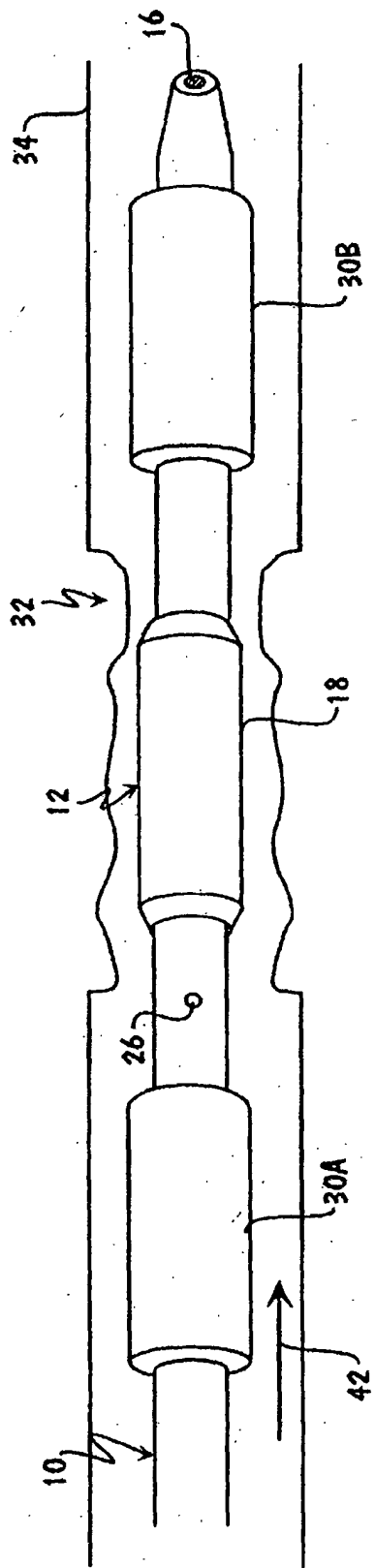


FIG. 9H

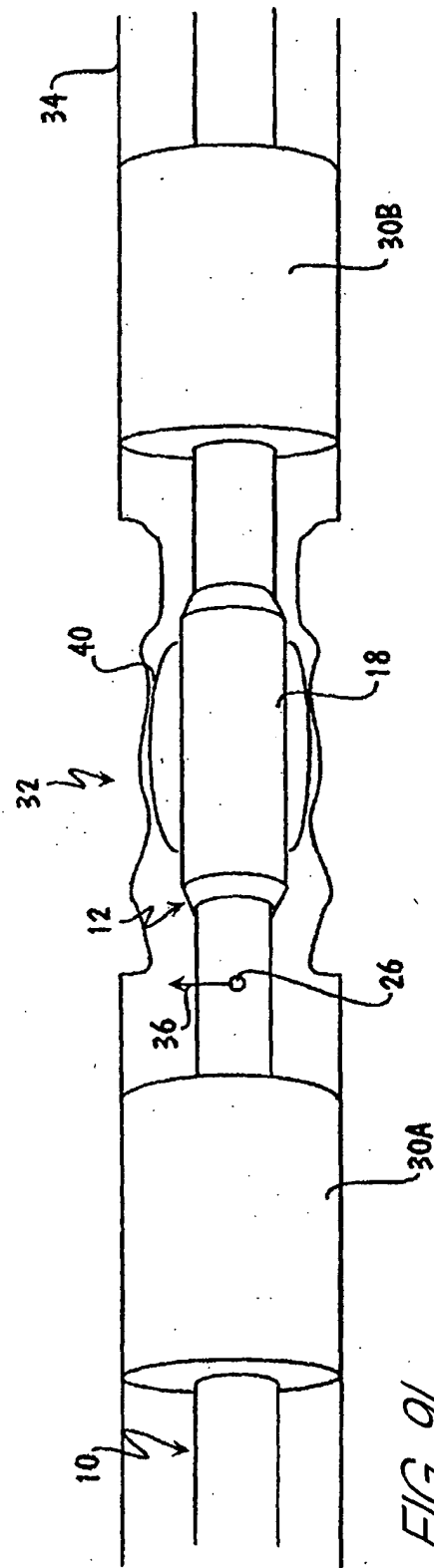


FIG. 9I

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

Atty Docket: EKOS.8CP3DV1C3

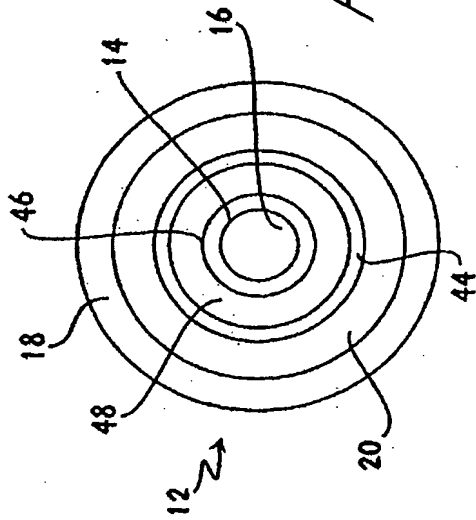


FIG. 10B

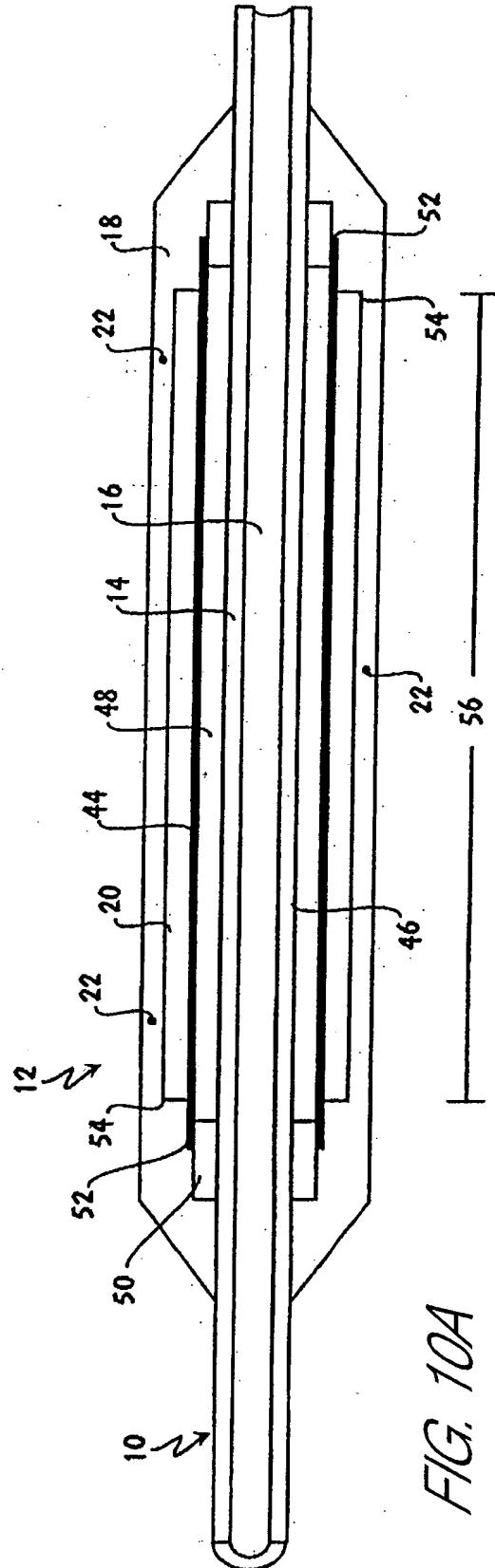


FIG. 10A

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

Atty Docket: EKOS.8CP3DV1C3

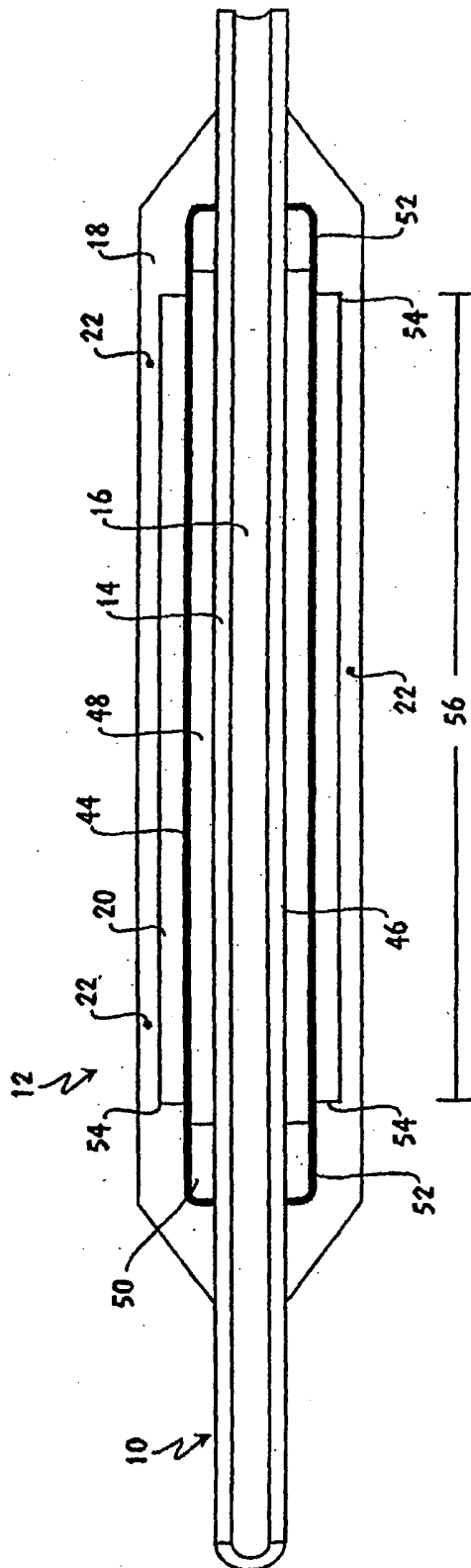


FIG. 10C



ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

Atty Docket: EKOS.8CP3DV1C3

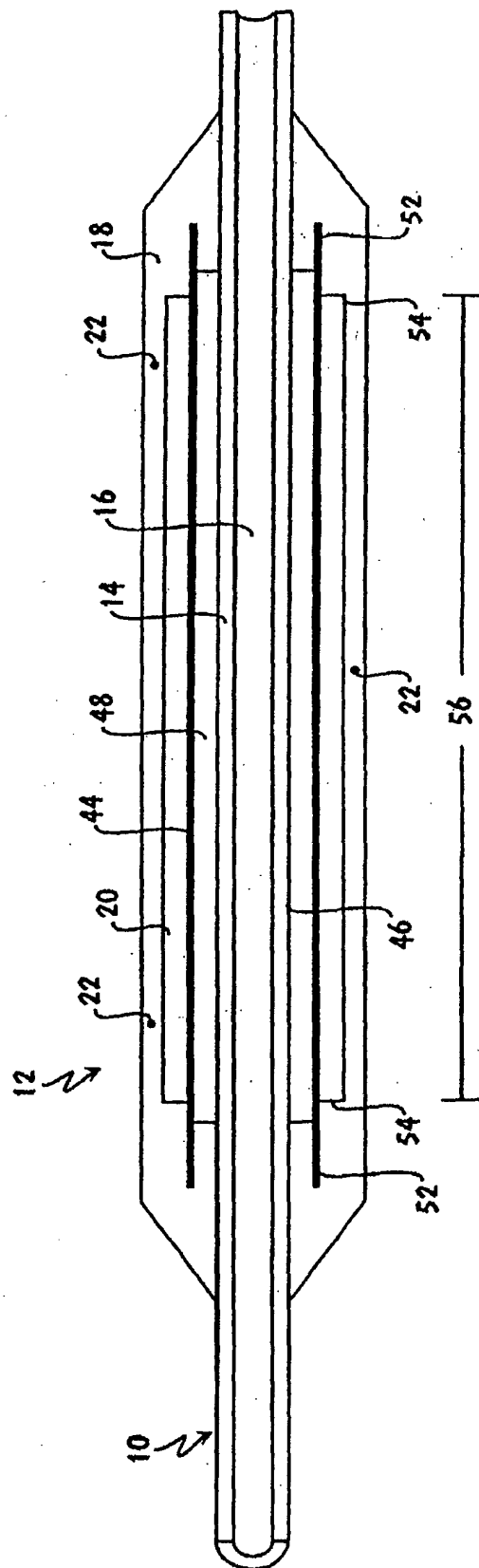


FIG. 10D

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

Atty Docket: EKOS.8CP3DV1C3

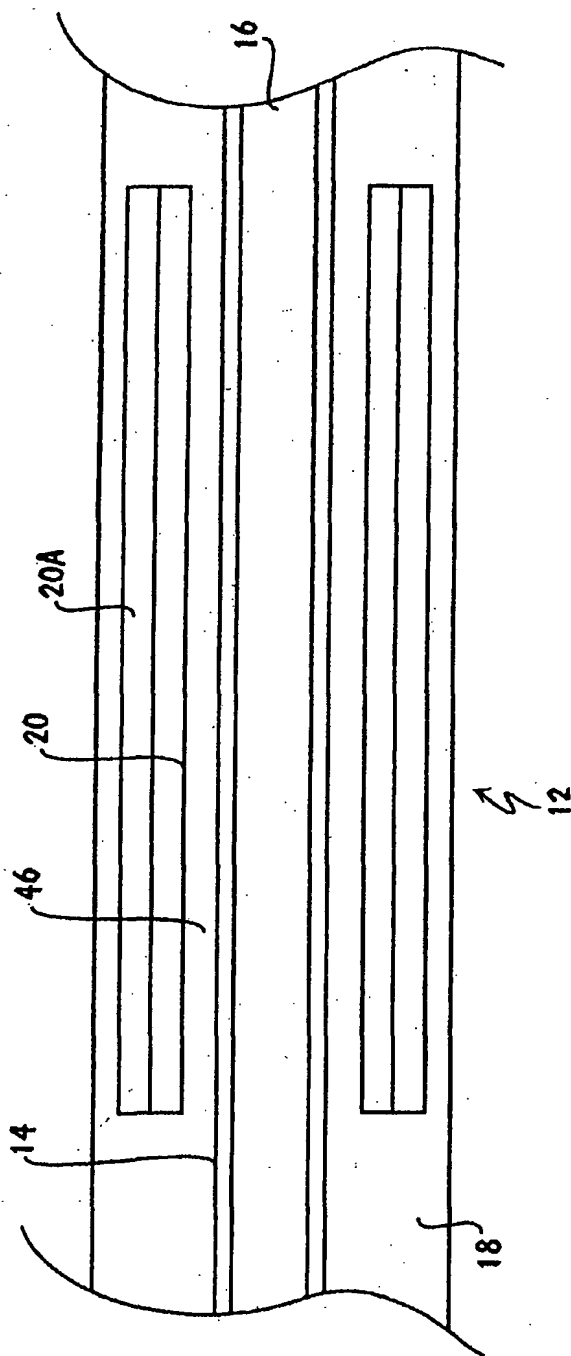


FIG. 11A

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown Atty Docket: EKOS.8CP3DV1C3

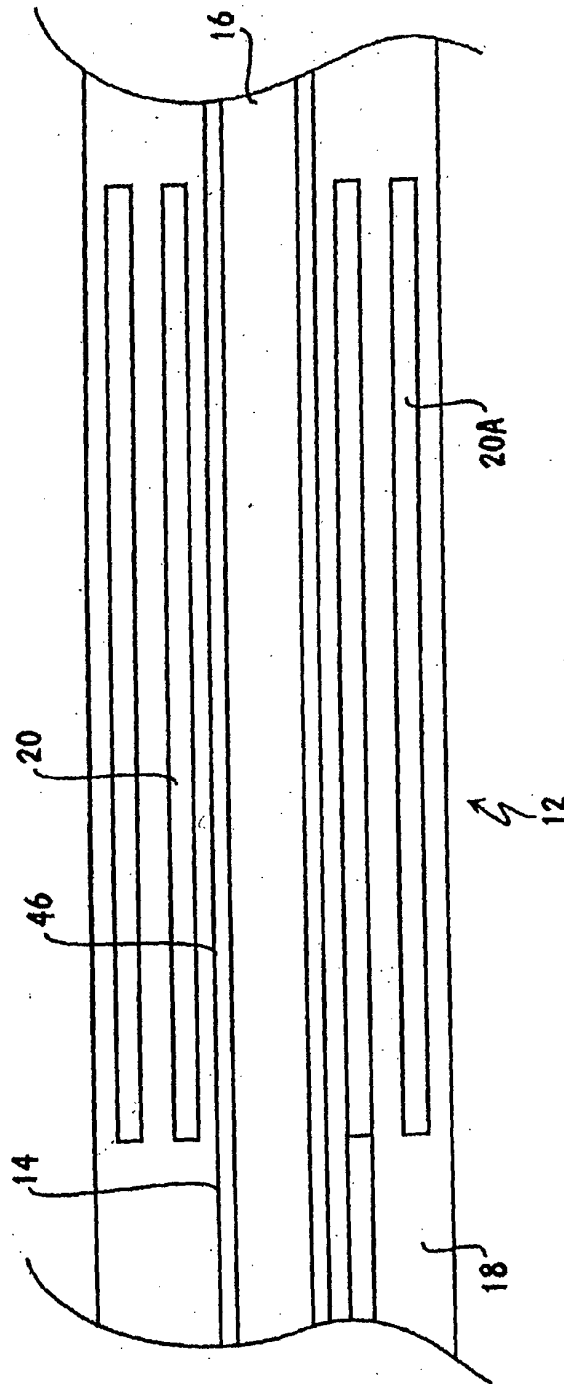


FIG. 11B

## DRUGS

*Appl. No.: Unknown*

Atty Docket: EKOS.8CP3DV1C3



ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

Atty Docket: EKOS.8CP3DV1C3

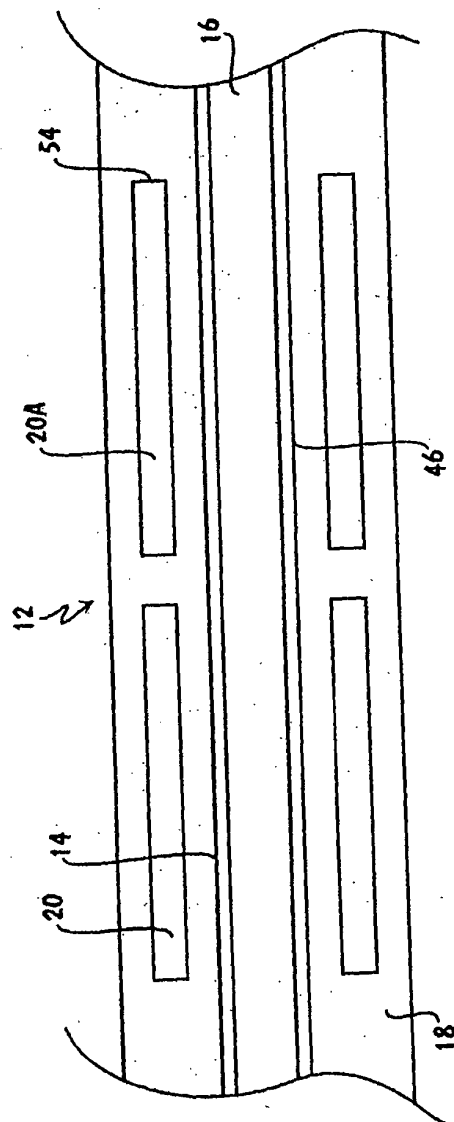


FIG. 11D

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

Atty Docket: EKOS.8CP3DVIC3

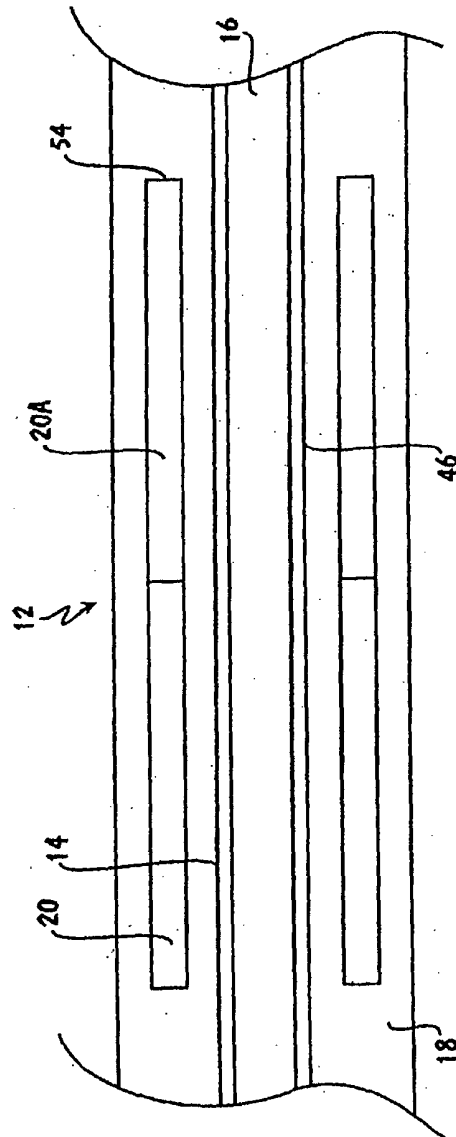


FIG. 11E

Appl. No.: Unknown      Atty Docket: EKOS.8CP3DV1C3

Atty Docket: EKOS.8CP3DV1C3



ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

Atty Docket: EKOS.8CP3DV1C3

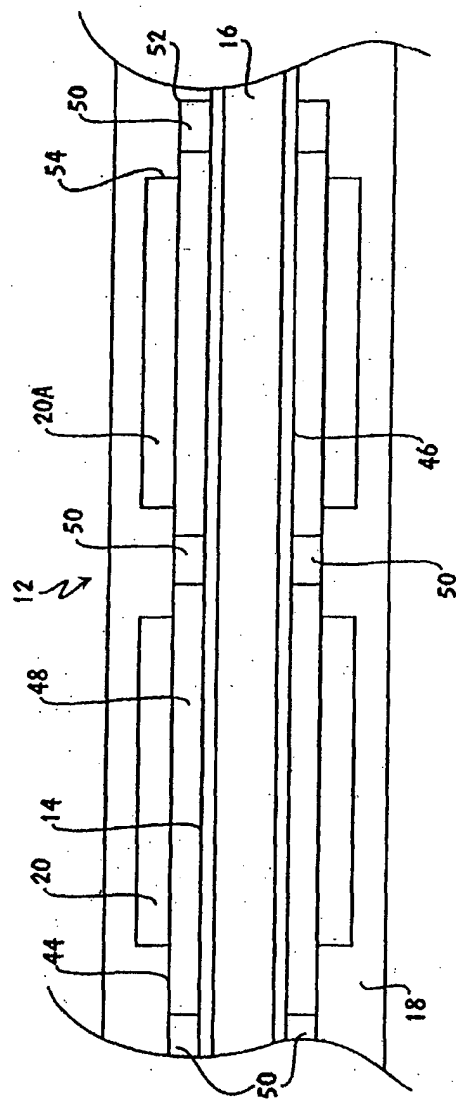


FIG. 11G



Appl. No.: Unknown      Atty Docket: EKOS.8CP3DV1C3

Appl. No.: Unknown      Atty Docket: EKOS.8CP3DV1C3

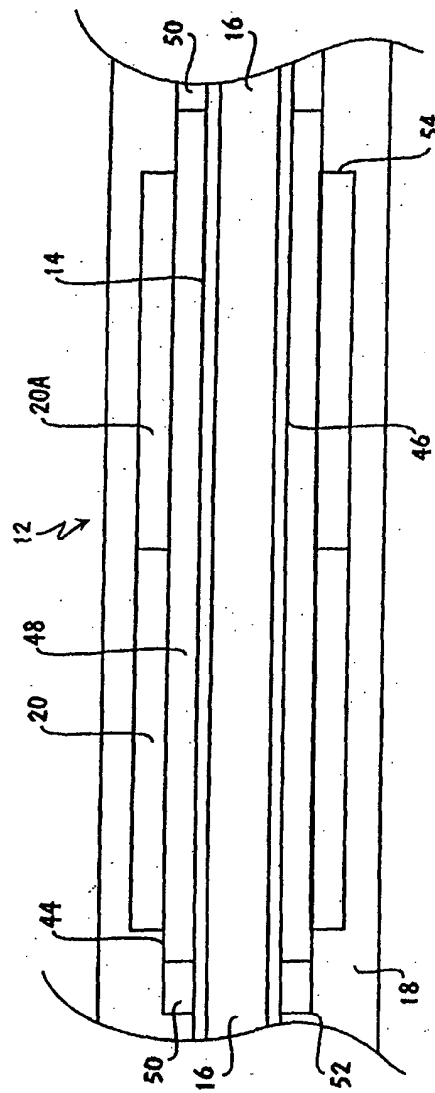
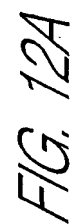


FIG. 11H

*Katsuro Tachibana, et al.*  
*Appl. No.: Unknown Atty Docket: EKOS.8CP3DV1C3*

Atty Docket: EKOS.8CP3DV1C3



ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

Atty Docket: EKOS.8CP3DV1C3

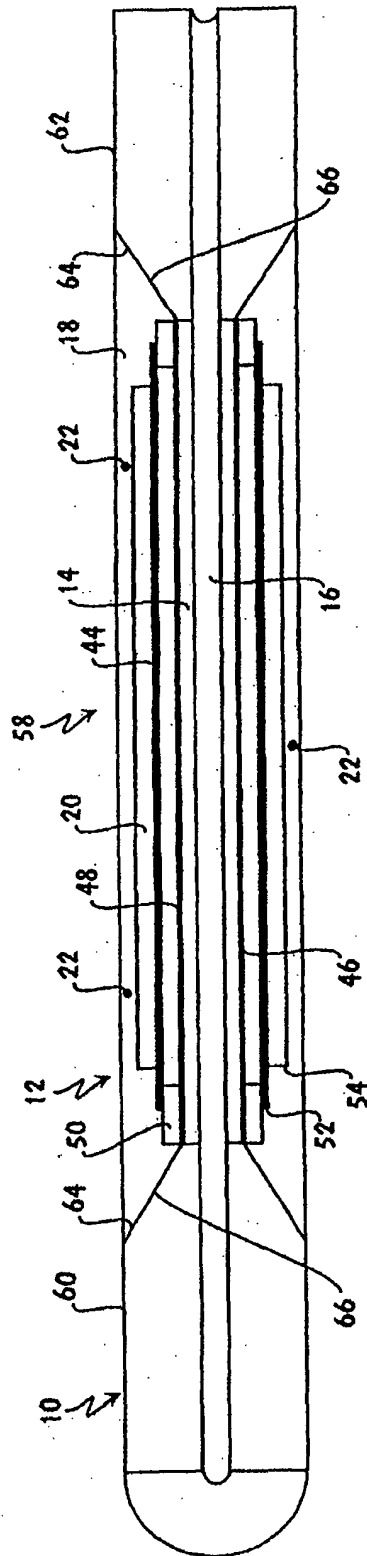


FIG. 12B

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

Atty Docket: EKOS.8CP3DV1C3

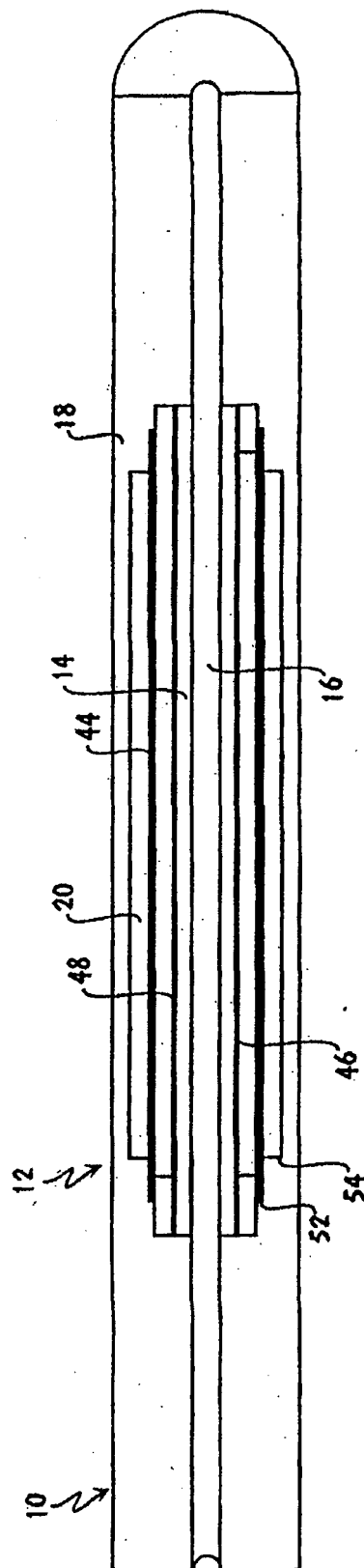


FIG. 12C

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

Atty Docket: EKOS.8CP3DV1C3

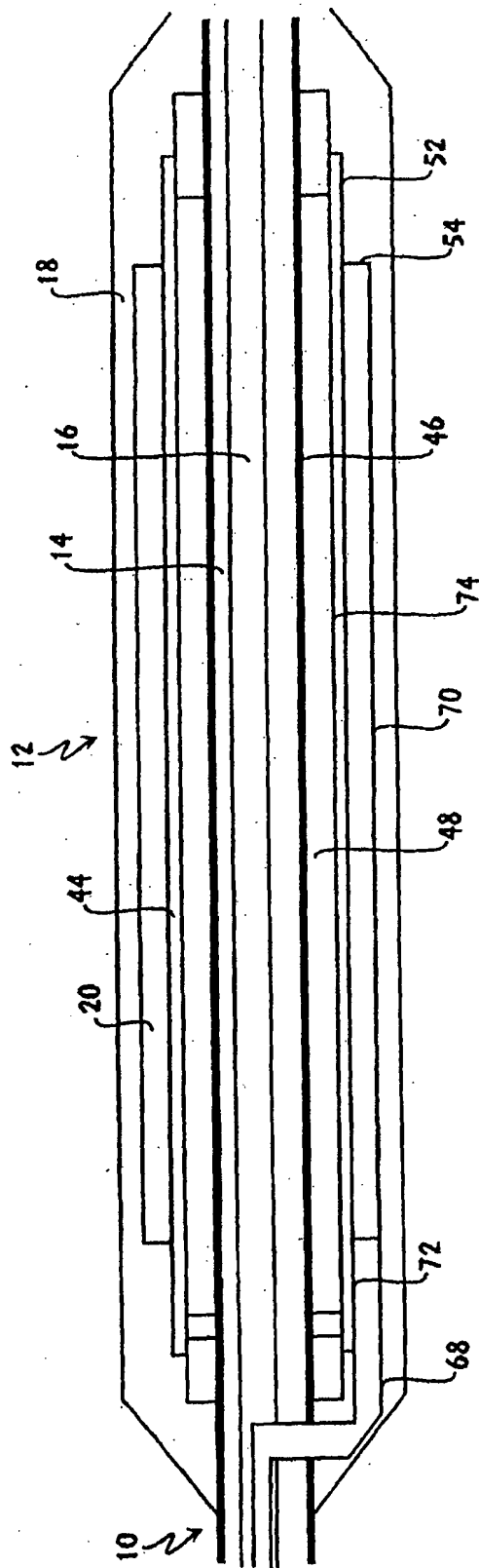


FIG. 13A

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

Atty Docket: EKOS.8CP3DVIC3

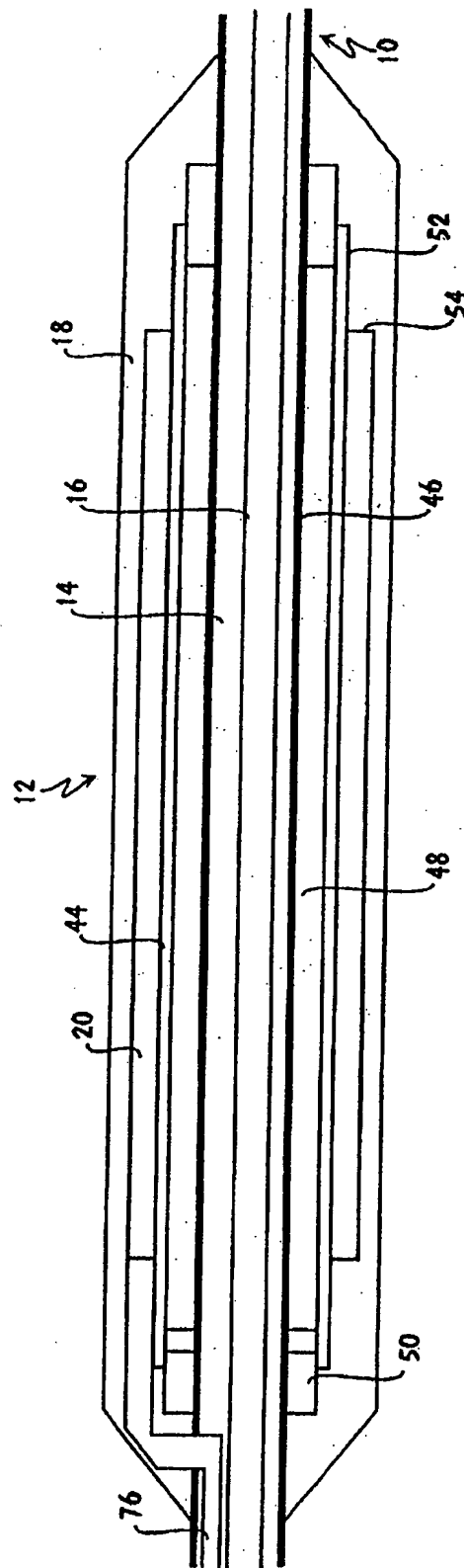


FIG. 13B

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

Atty Docket: EKOS.8CP3DV1C3

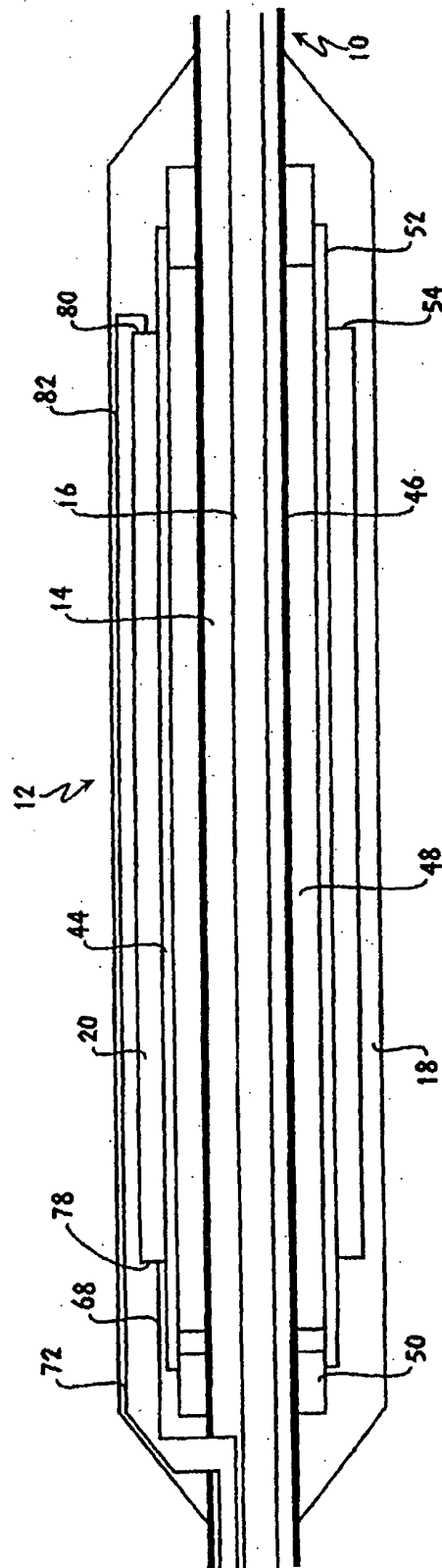


FIG. 13C

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

Atty Docket: EKOS.8CP3DV1C3

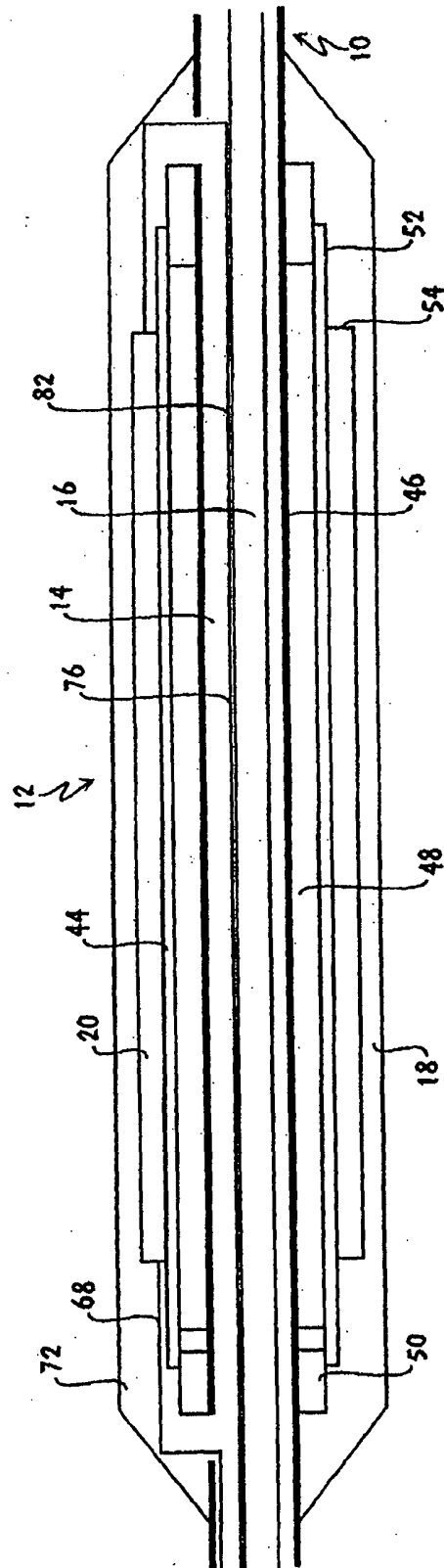


FIG. 13D



ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

Atty Docket: EKOS.8CP3DV1C3

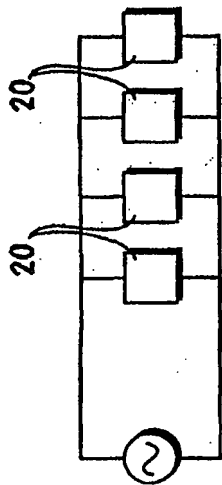


FIG. 14A

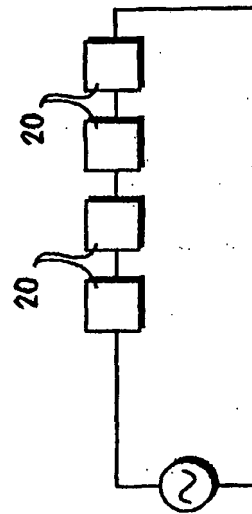


FIG. 14B

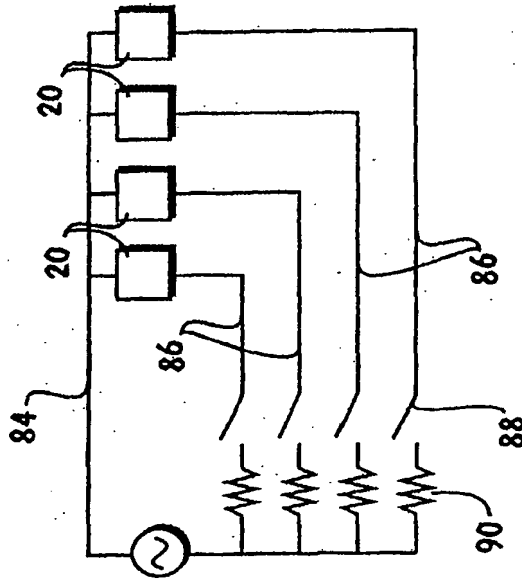


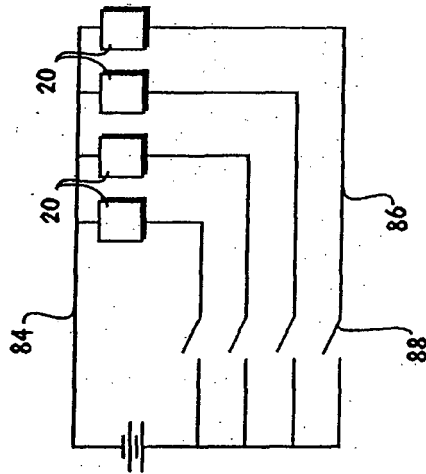
FIG. 14C

*ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS*

*Katsuro Tachibana, et al.*

*Appl. No.: Unknown*

*Atty Docket: EKOS.8CP3DV1C3*



*FIG. 15*

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

Atty Docket: EKOS.8CP3DV1C3

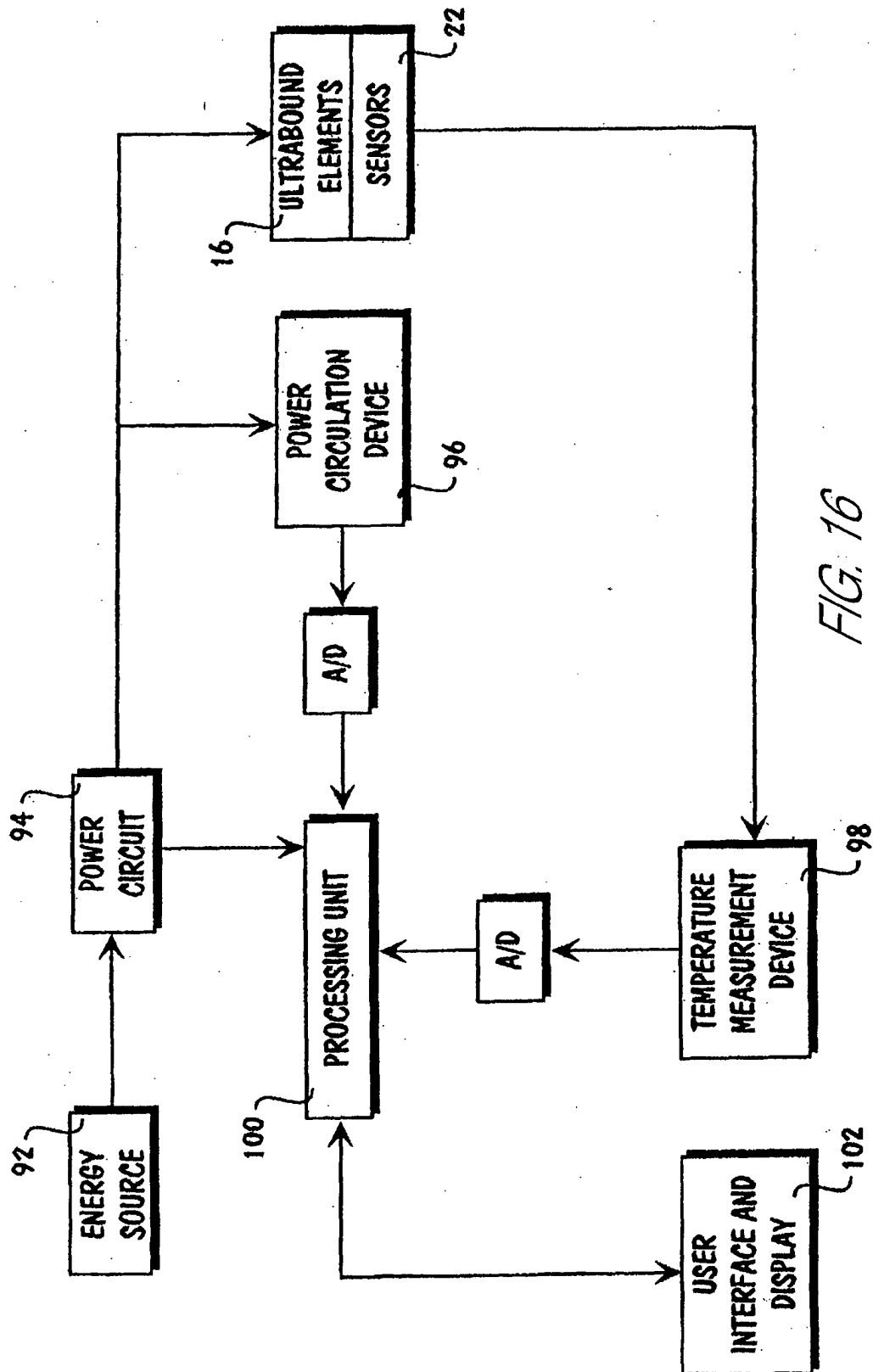


FIG. 16

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

Atty Docket: EKOS.8CP3DV1C3

CHLORINA

NATURALLY OCCURRING:

FIG. 17C

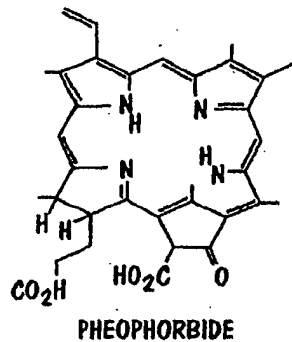
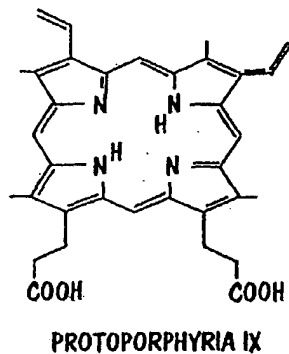


FIG. 17A

PORPHYRINA:

NATURALLY OCCURRING:



SYNTHETIC:

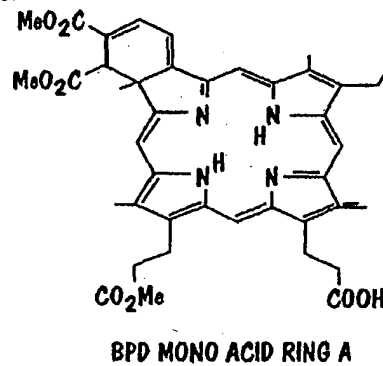


FIG. 17D

SYNTHETIC:

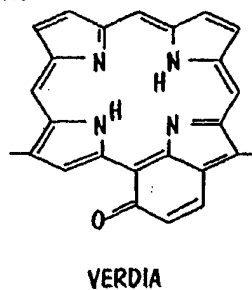


FIG. 17B

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

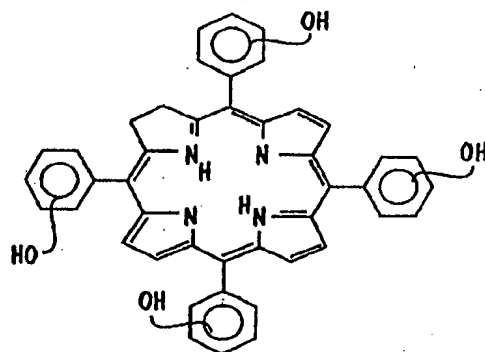
Katsuro Tachibana, et al.

Appl. No.: Unknown

Atty Docket: EKOS.8CP3DV1C3

FIG. 17E

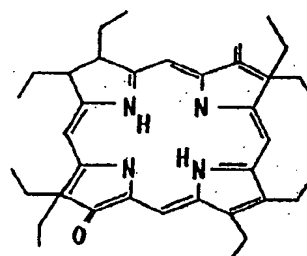
SYNTHETIC:



MESO-TETRA (HYDROXYPHENYL)  
CHLORIN

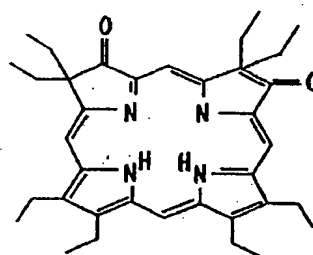
FIG. 17H

SYNTHETIC:



OCTAETHYLDIOXOBACTERIOCHLORIN

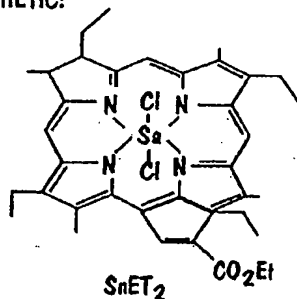
SYNTHETIC ISOBACTERIOCHLORIN:



OCTAETHYLDIOXOBACTERIOCHLORIN

SYNTHETIC:

FIG. 17F



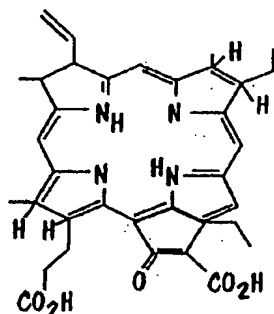
SnEt<sub>2</sub> CO<sub>2</sub>Et

FIG. 17I

BACTERIACHLORINA:

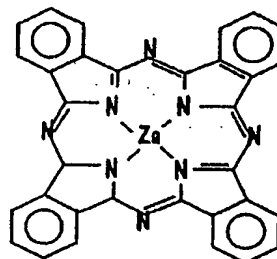
NATURALLY OCCURRING:

FIG. 17G



BACTACIOPHAOPHORBIDE

PHTHALOCYARINEA:



ZINC PHTHALCYANINE

FIG. 17J

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

Appl. No.: Unknown

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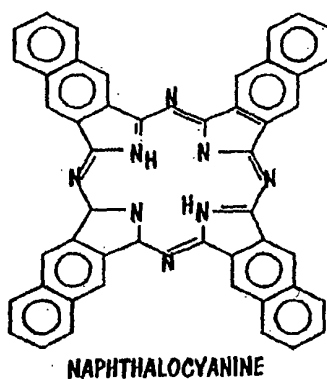


FIG. 17K

PORPHYCENES:

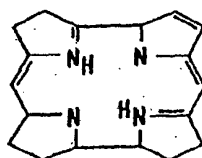


FIG. 17L

SAPPHYRINS:

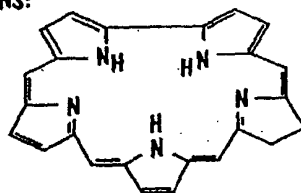


FIG. 17M

TEXAPHYRIAS:

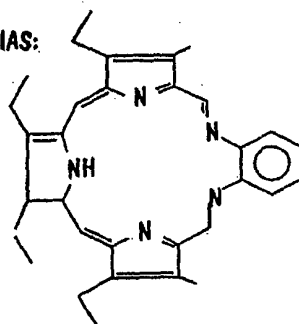


FIG. 17N

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

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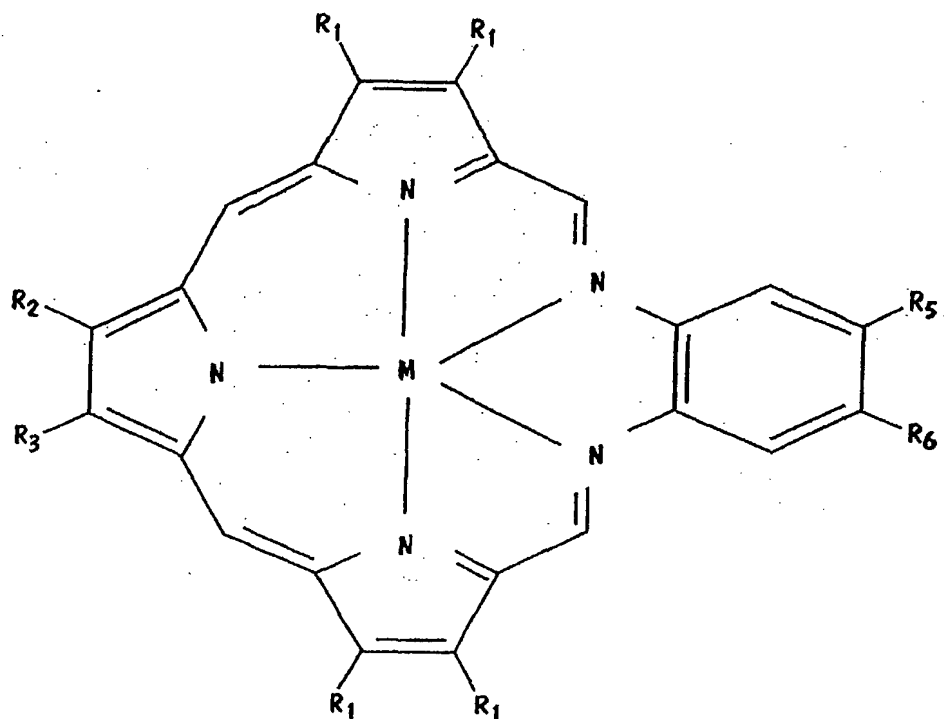


FIG. 17B-2

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

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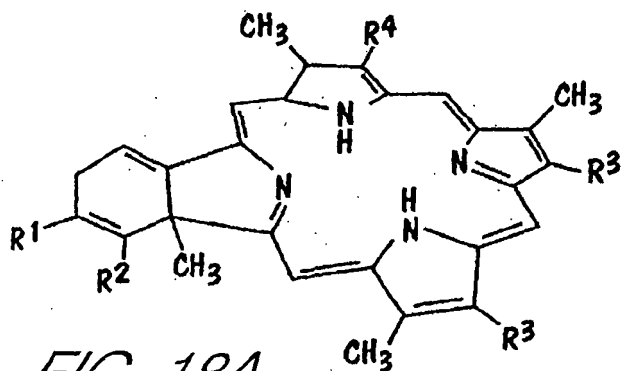


FIG. 18A

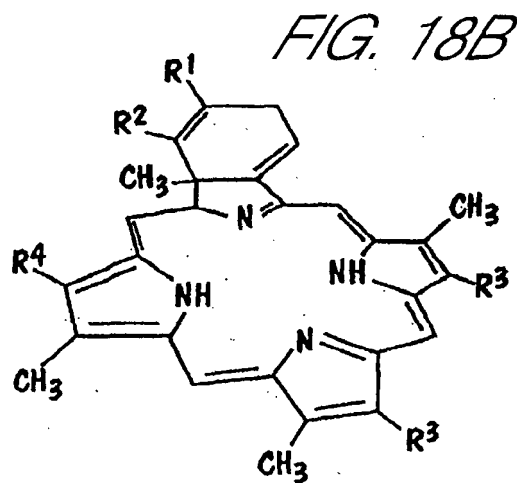


FIG. 18B

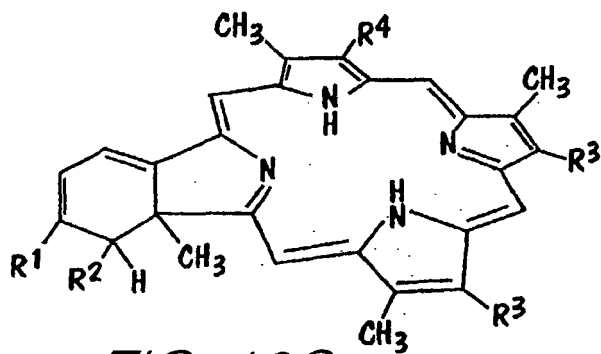


FIG. 18C

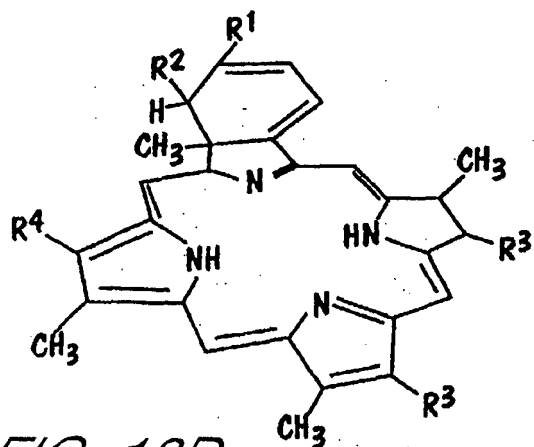


FIG. 18D



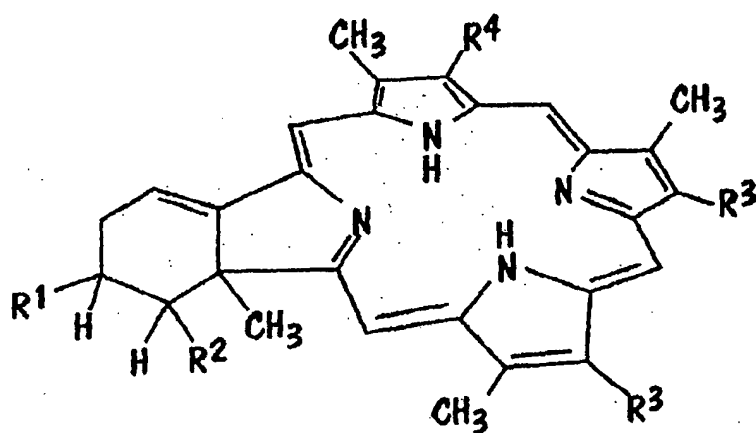
ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

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FIG. 18E



OR

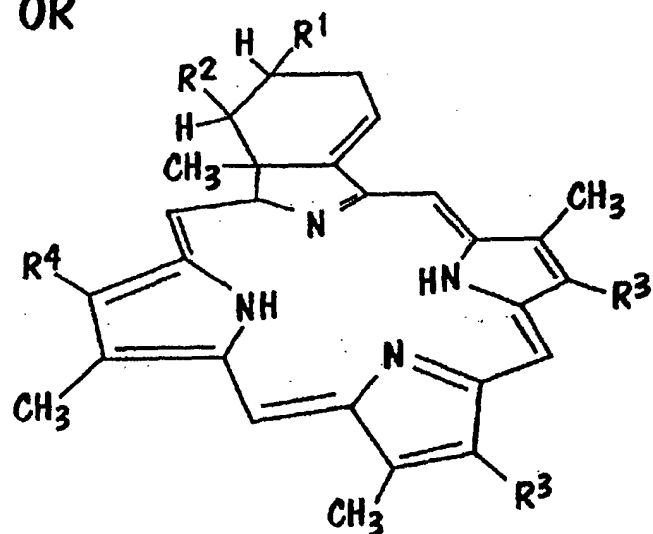


FIG. 18F

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

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Atty Docket: EKOS.8CP3DV1C3

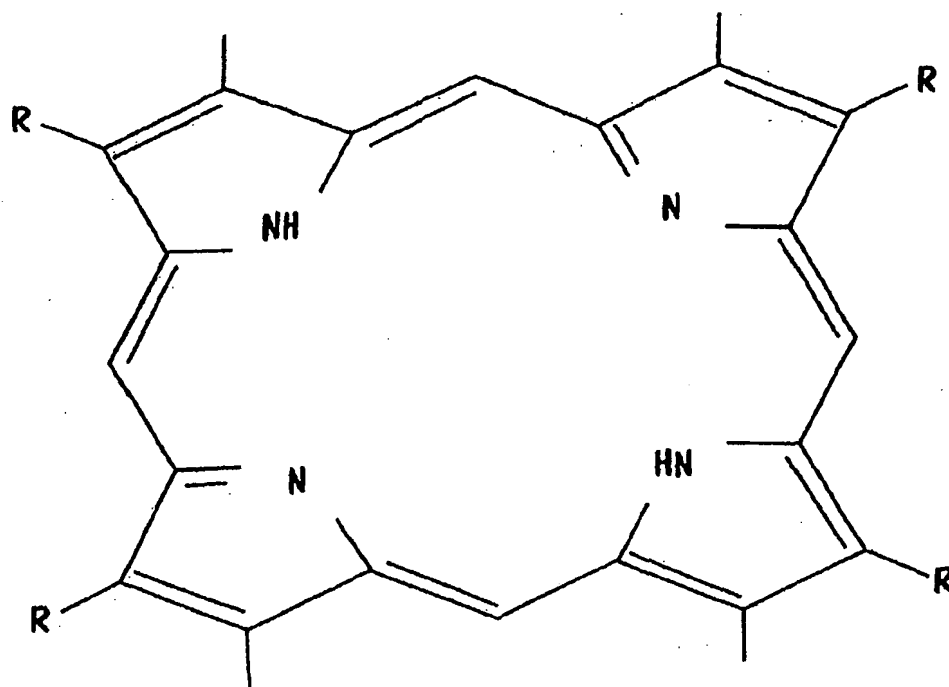


FIG. 19

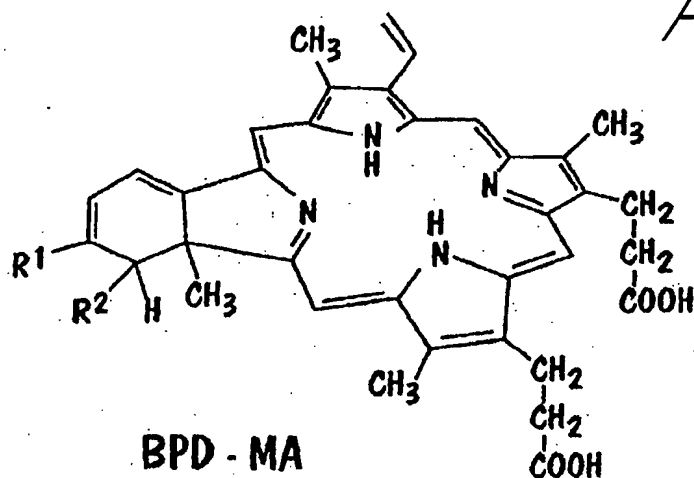
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DRUGS

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FIG. 20A



AND

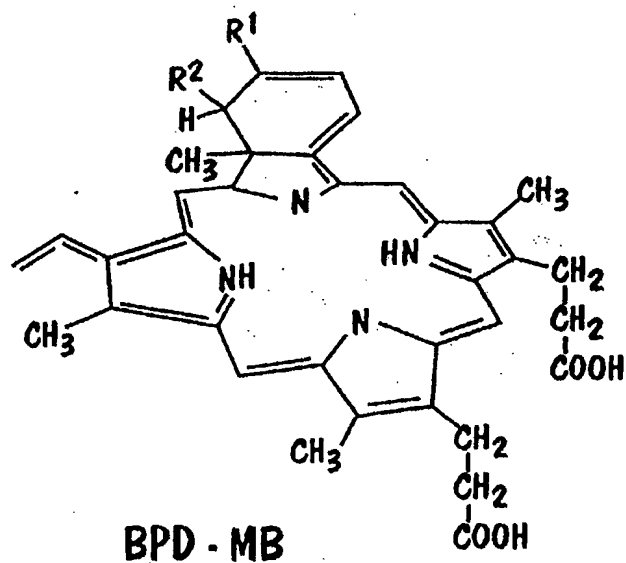


FIG. 20B

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

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FIG. 20C

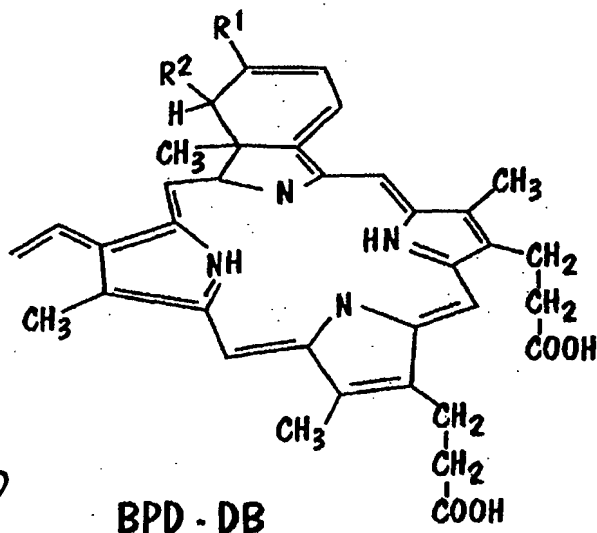
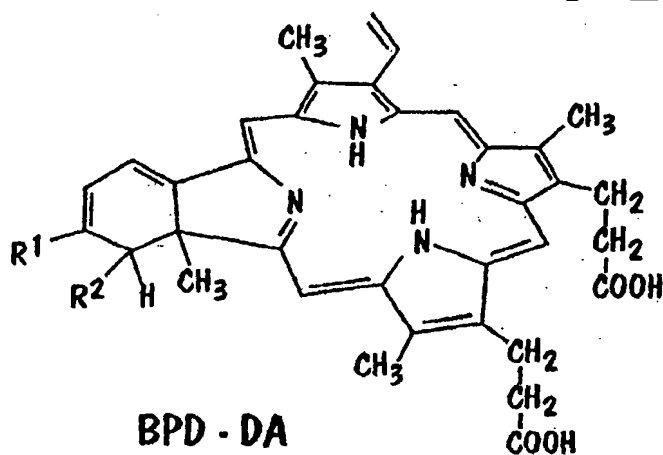


FIG. 20D

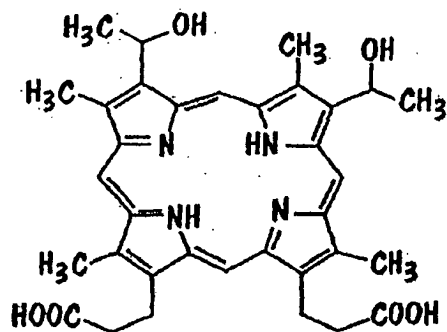
ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

Katsuro Tachibana, et al.

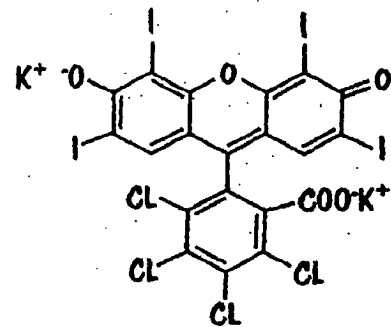
Appl. No.: Unknown

Atty Docket: EKOS.8CP3DV1C3

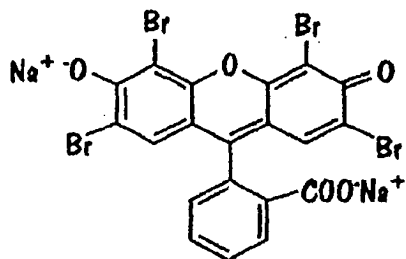
HEMATOPORPHYRIN  
[FORMULA A]



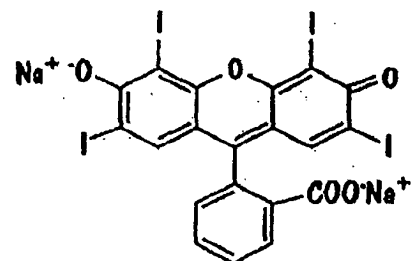
ROSE BENGAL  
[FORMULA B]



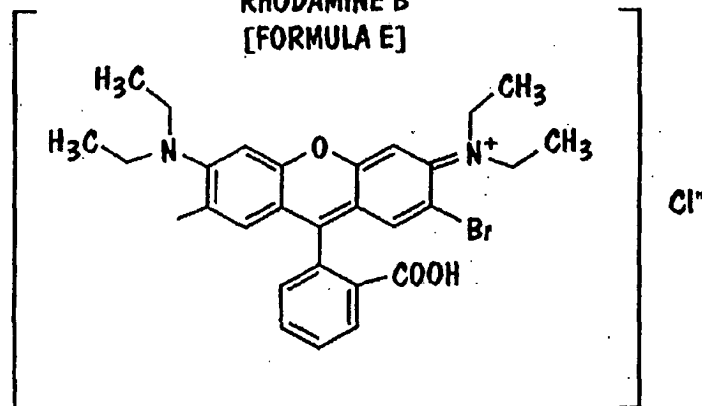
EROSIN Y  
[FORMULA C]



ERYTHROCIN  
[FORMULA D]



RHODAMINE B  
[FORMULA E]



## ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED DRUGS

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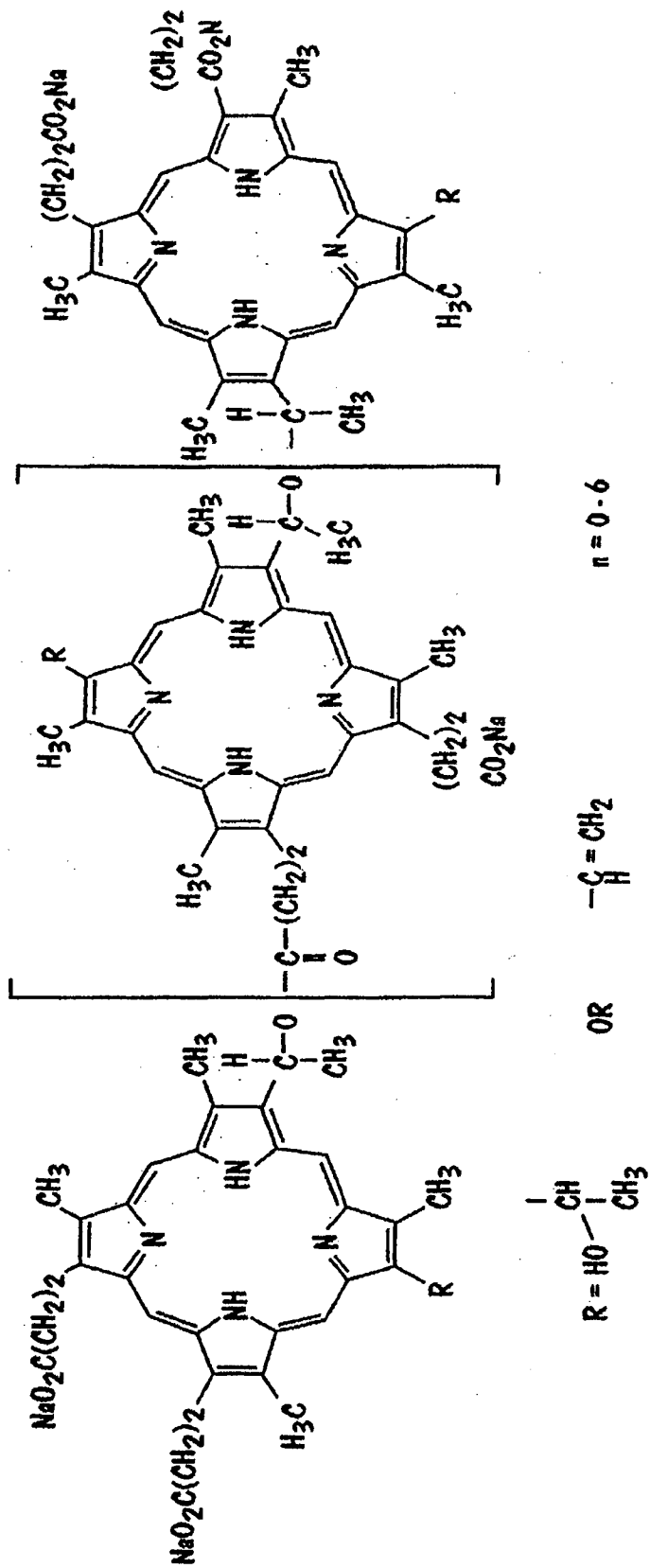


FIG. 21B

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

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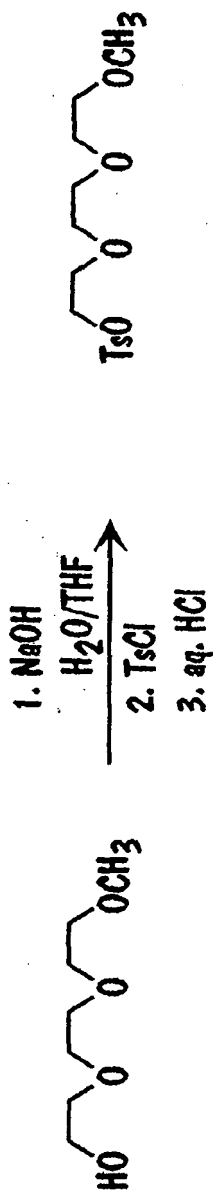


FIG. 22A

FIG. 22B

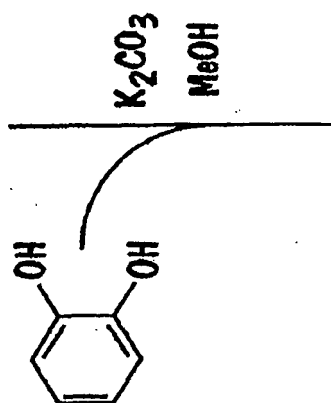


FIG. 22C

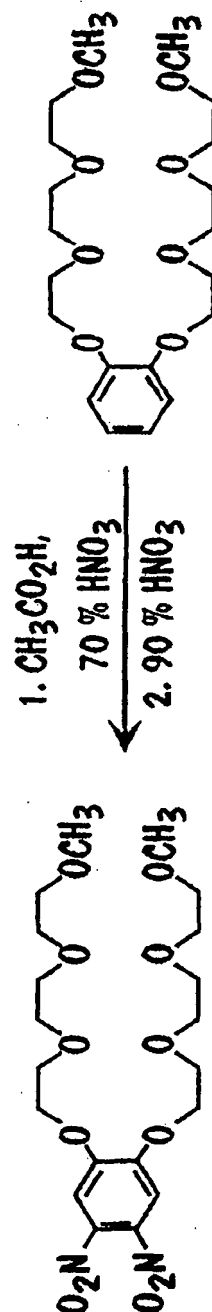


FIG. 22E

FIG. 22D

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

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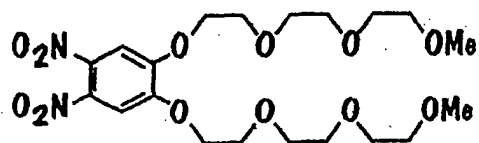


FIG. 22E

HYDRAZINE HYDRATE,  
10% Pd/C, EtOH

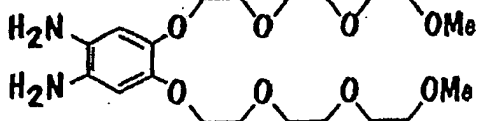


FIG. 22F

+

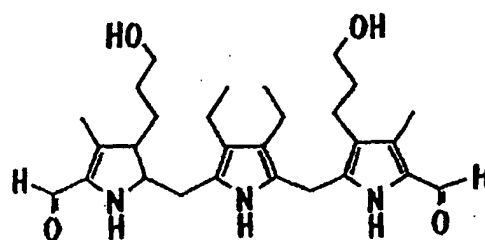


FIG. 22G

1.2 eq 12M HCl,  
MeOH

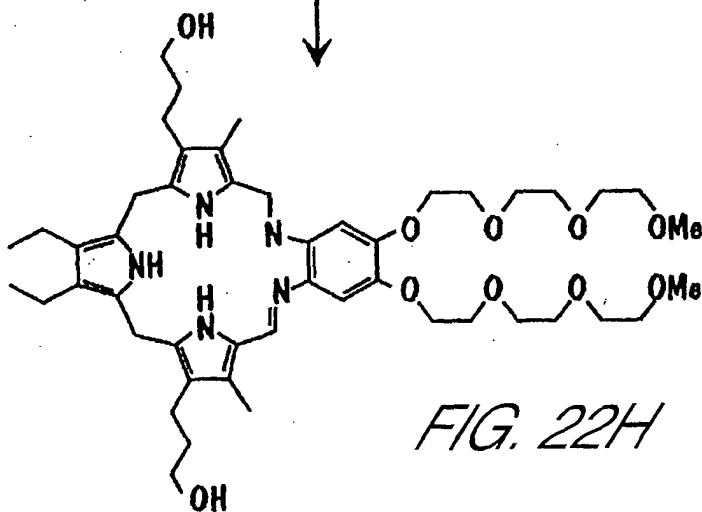


FIG. 22H



ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

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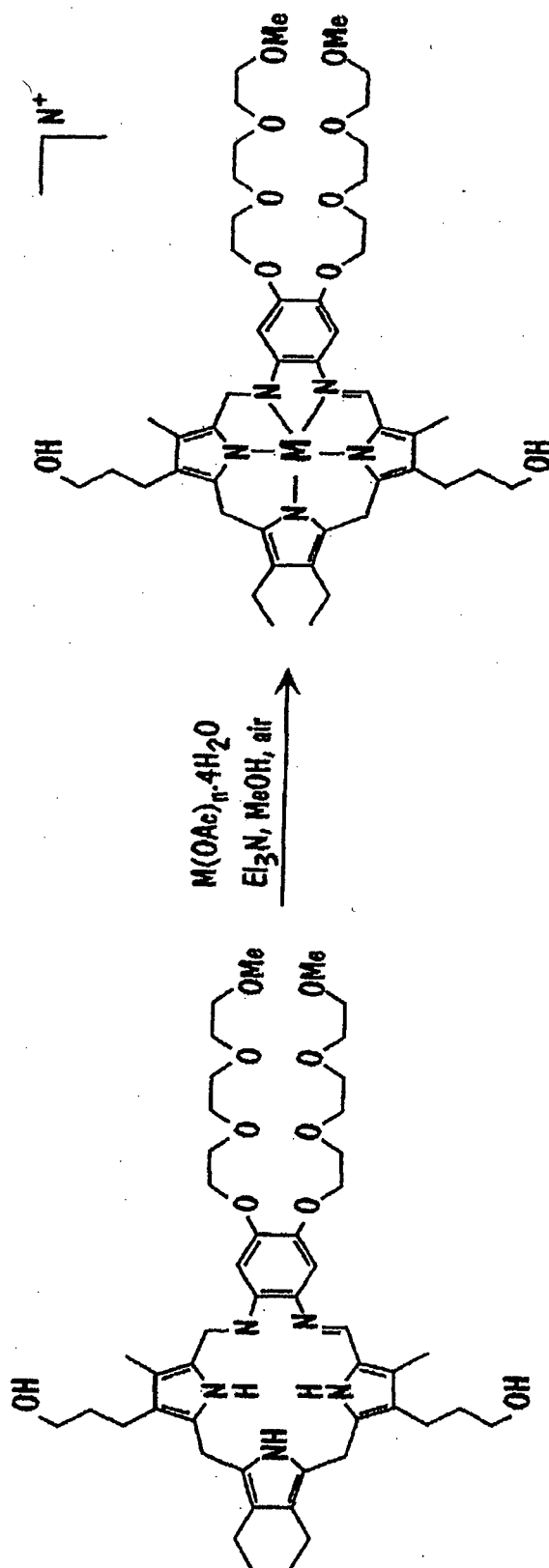


FIG. 22I

FIG. 22H

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

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Atty Docket: EKOS.8CP3DV1C3

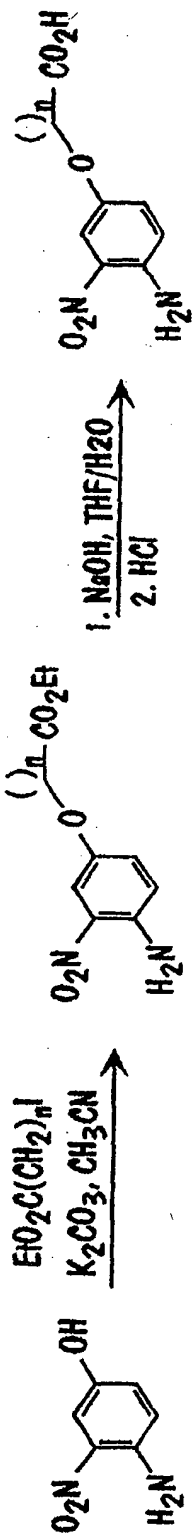


FIG. 23A

FIG. 23B

FIG. 23C

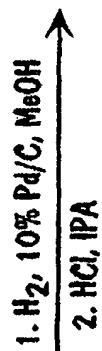


FIG. 23D

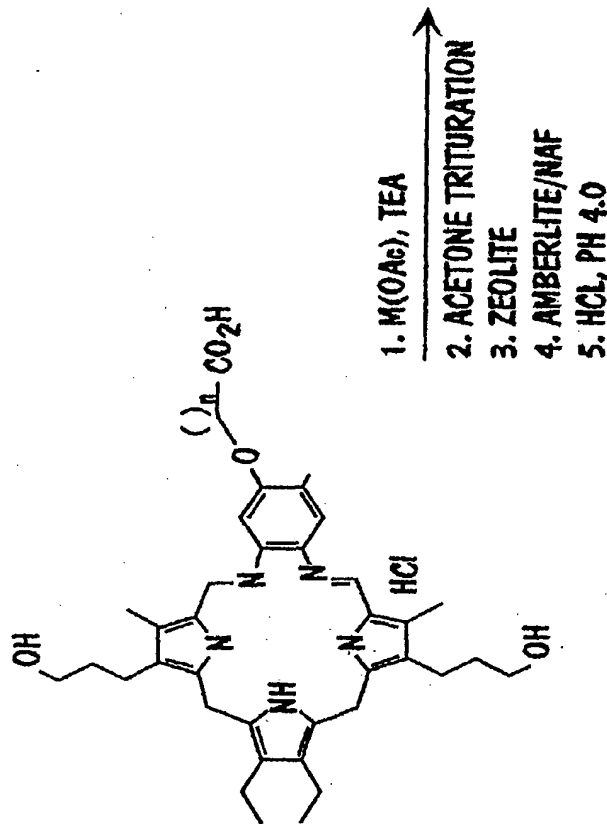


FIG. 23E

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2. 5' · NH<sub>2</sub>-(CH<sub>2</sub>)<sub>6</sub>-P<sub>04</sub>-CTC GGC CAT AGC GAA TGT TC-3  
(0.4 M NaHCO<sub>3</sub>, pH 8.6) SEQ. ID. NO. 1

FIG. 23G

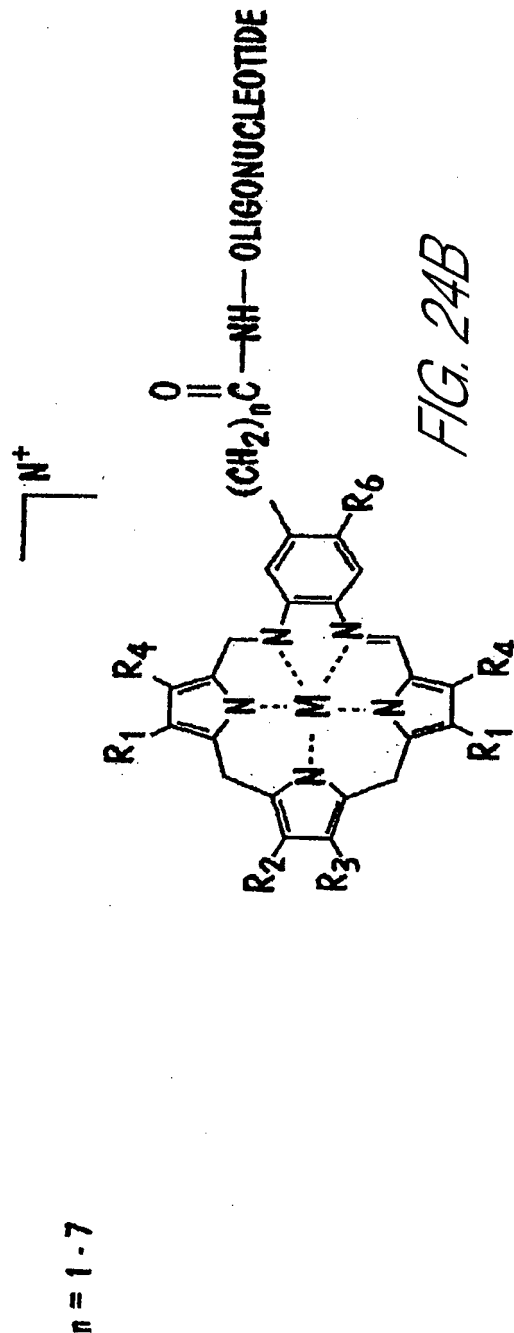
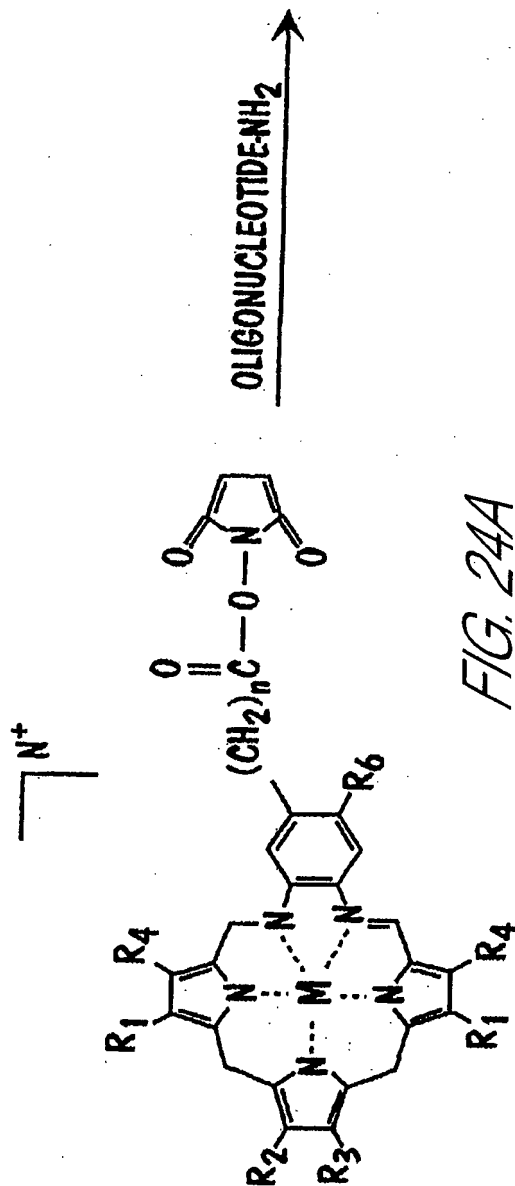


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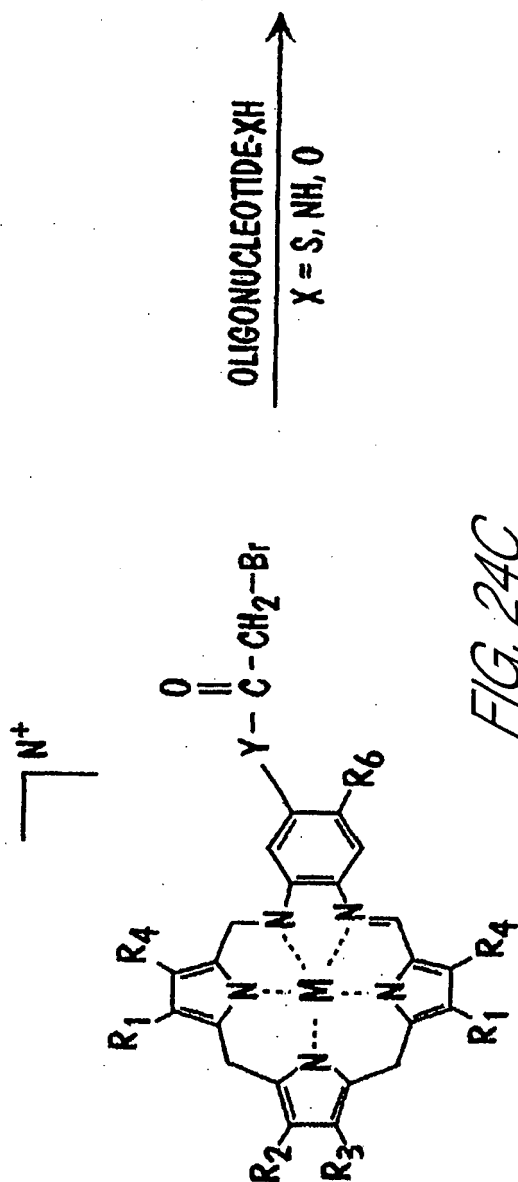


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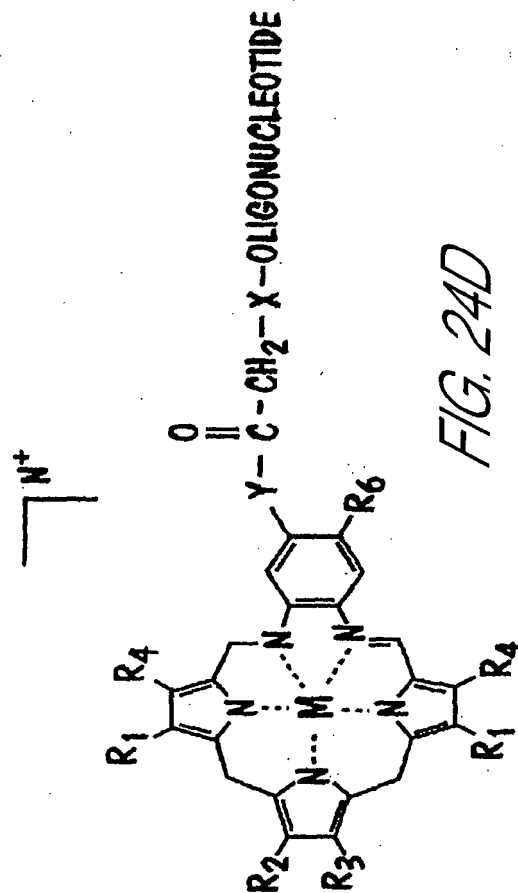
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$n = 1-7$

OLIGONUCLEOTIDE-XH  
 $X = S, NH, O$



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1. NHS, DCC, DMF
2. OLIGONUCLEOTIDE-NH<sub>2</sub> 90.4 M NaHCO<sub>3</sub>, pH 8.6

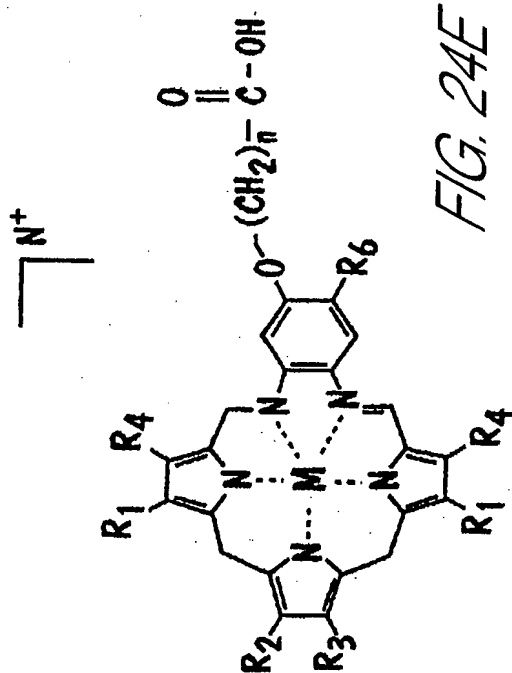


FIG. 24E

n = 1-7

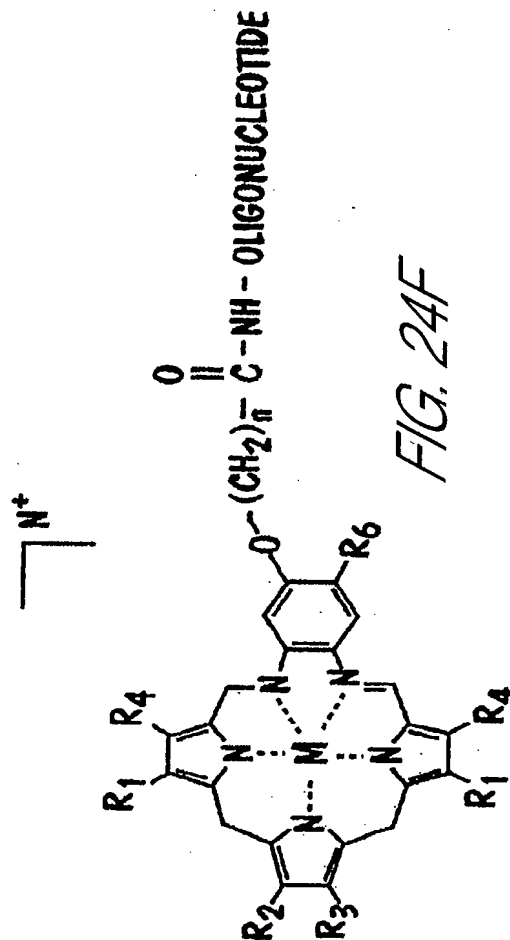


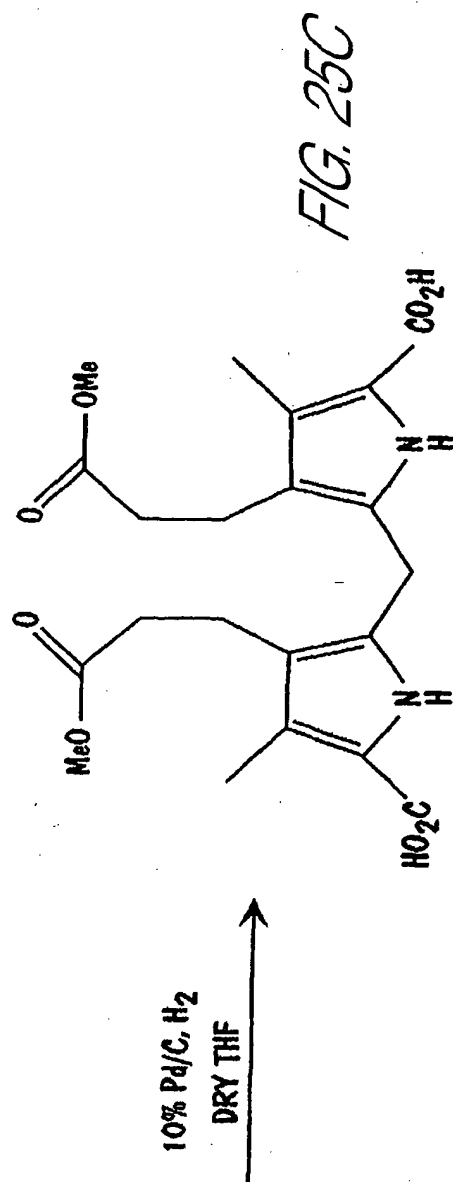
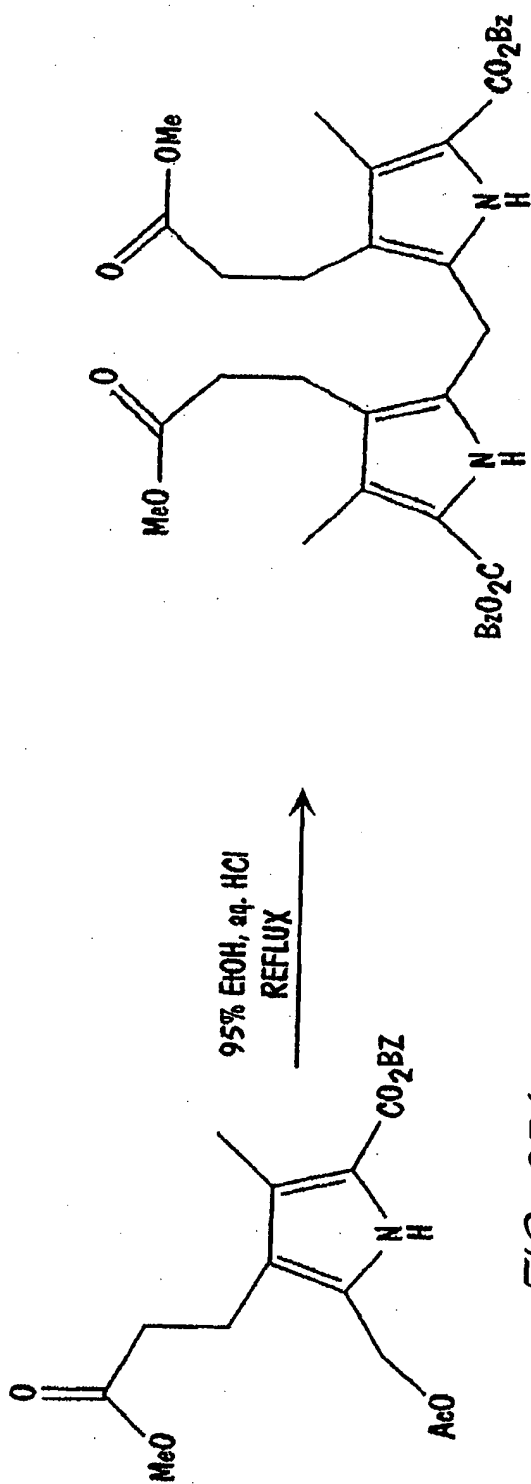
FIG. 24F

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

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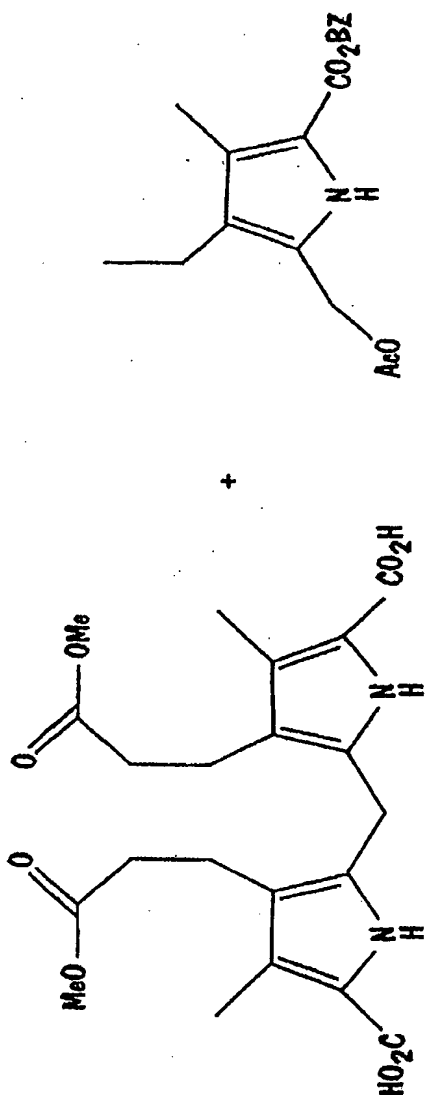


FIG. 25D

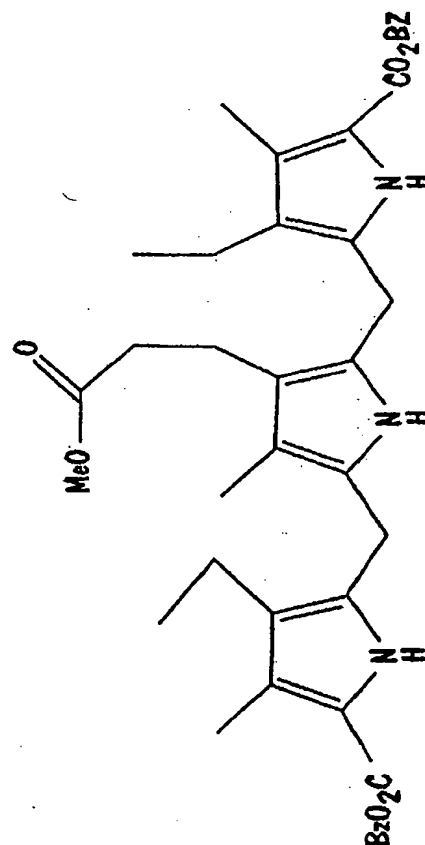
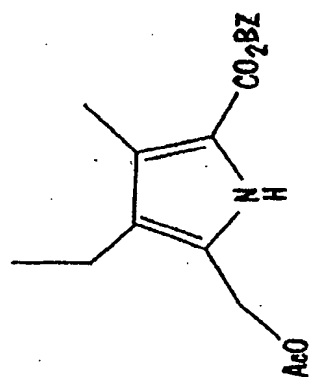


FIG. 25E

10% Pd/C, H<sub>2</sub>  
DRY THF

FIG. 25F



ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
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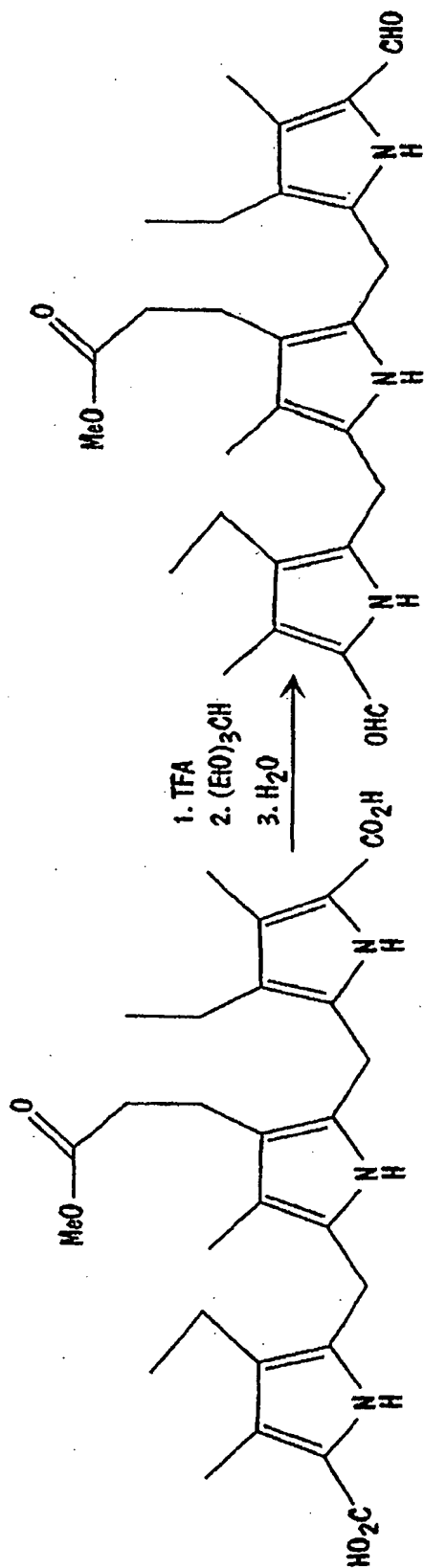


FIG. 25F

FIG. 25G

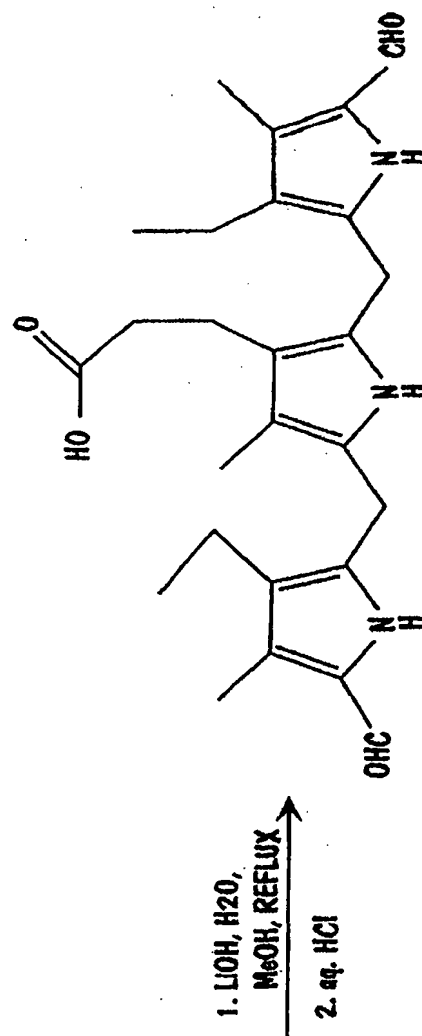


FIG. 25H

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

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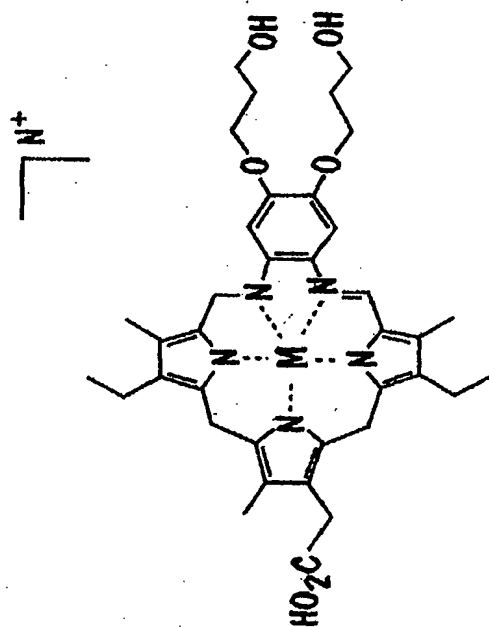


FIG. 25I

1. NHS, DCC, DMF  
2. OLIGONUCLEOTIDE- $\text{NH}_2$  (0.4 M  $\text{NaHCO}_3$ , pH 8.6)

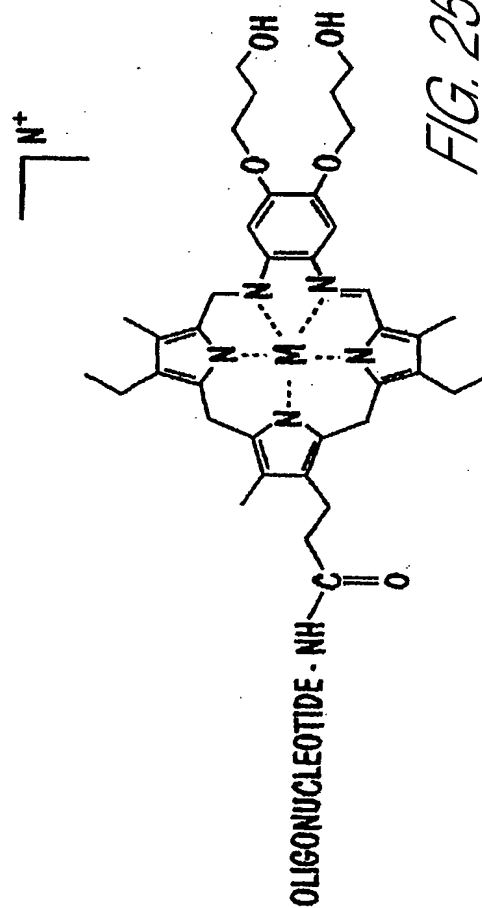


FIG. 25J

ULTRASOUND ASSEMBLY FOR USE WITH LIGHT ACTIVATED  
DRUGS

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Atty Docket: EKOS.8CP3DV1C3

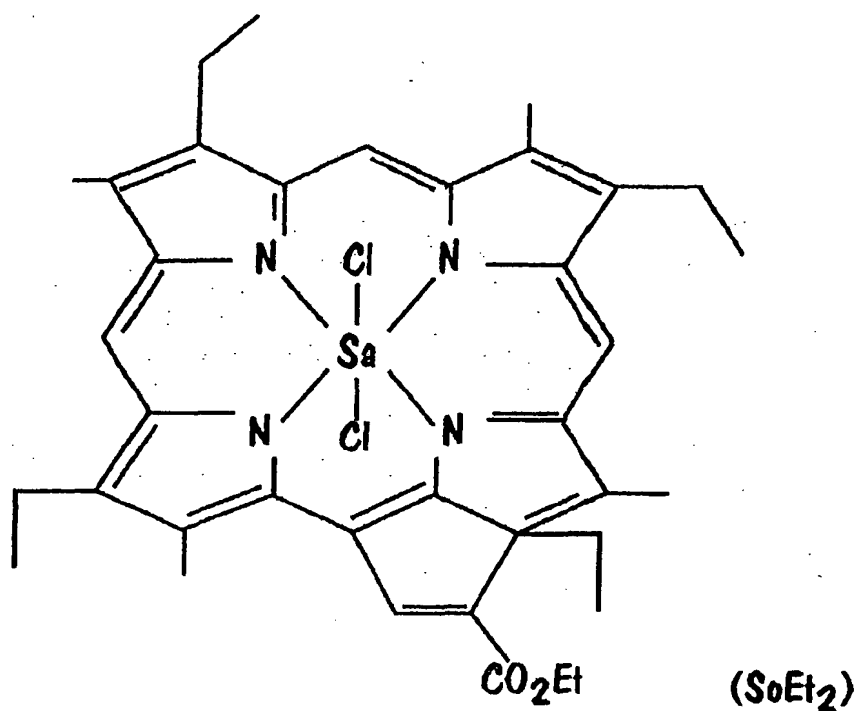


FIG. 26